The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees.

VOL. XXXVIII. CHICAGO, SATURDAY, MAY 24, 1902. No. 21.

Original Articles.

THE TREATMENT OF INOPERABLE SEPTIC PERITONITIS.*

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The acceptance of this title presupposes that you will permit me to assume that certain cases of septic peritonitis of appendiceal, intestinal and tubal origin may become inoperable, i. e., that the interests of the patient may be better served at times through the adoption of non-surgical measures. This position must be conceded by the radical appendicitis operators in the "operate as soon as the diagnosis is made" class, when they are pinned down to particularly grave cases, for they all meet some cases in which they are unwilling to operate.

Septic peritonitis usually has its origin in some local point of infection and the gravity of the symptoms depends upon the virulence of the infection and the area of peritoneum involved through the diffusion of the process; those measures that tend to limit the spread of the infection and favor its localization to a circumscribed area must favor the limitation of the disease and the recovery of the patient.

The oviducts, the vermiform appendix and the last loop of the ileum—the viscera from which such infections most often arise—are more or less favorably situated for the localization of the infection. Those who operate many times for such conditions have seen frequent instances of such limitations about the fimbriated ends of the oviducts and the vermiform appendix. Gynecologists see patients every day who present conditions of so-called pelvic cellulitis that we now know to be nothing more nor less than a circumscribed pelvic peritonitis, the result of infection from a leaking oviduct, which the conservative agencies of the animal economy are taking care of most beautifully through the formation of peritoneal adhesions and the deposit of plastic exudate about the danger point.

Infections from intestinal perforations, appendicitis and diseases of the oviducts are relatively dangerous in the order here given. Taking the total volume of all such cases the tubal infections are apt to be least malignant, those from the appendix much more so and those from intestinal perforations most malignant; moreover, the oviducts occupy the lowest point in the peritoneal cavity where walling off is most easily effected by nature, the appendix being less favorably situated and the intestines least favorably placed. Several years ago I heard the late Dr. John Ashhurst say, in a meeting of the Philadelphia Obstetrical Society, that infections of the lower portion of the peritoneal cavity were better borne and better guarded than those of the upper part. While his statement was questioned then, I believe it would be accepted by surgeons quite generally at this time. To me it seems a very true statement, which my years of observation would confirm.

We must also take into account the volume of infecting material poured into the peritoneal cavity at one time and the relative activity and mobility of the viscus from which it comes, for this bears upon the diffusion of the poison as well as upon the ability of the peritoneum and omentum to cover and seal a leaking focus of infection; here again we find the tube most limited in its excursion, the appendix more free, and the intestine freest. As the relatively fixed organ permits of better protection from the peritoneum it would seem likely that the volume of infecting matter would be least from it, and greatest from the more freely movable ones. What we know of the clinical history of typhoid perforations and our findings at operations and autopsies subsequently would tend to confirm this view.

In its bearing upon treatment the foregoing pathologic résumé is of vital importance and must impress upon us the necessity for accurate diagnosis as to the source of our peritoneal infections and oblige us to consider carefully whether such cases as come under observation are safely operable cases at the time we see them and if not what the treatment should be until they may become safely operable.

As a surgeon and operator I am firmly convinced that early operations in all cases of this class are safer and wiser and more conservative of life than delay, that the operation adds little or nothing to the immediate danger in skilled hands and that the risks of the disease are vastly greater without operation than with it. This again is relatively most true of intestinal perforations, than of appendix infections, and least true of those of tubal origin. The time at which a particular case may be more safely regarded as inoperable can not be arbitrarily set down in hours or days, but must depend upon the differential diagnosis and the clinical signs. For example, the diagnosis being typhoid perforation, operation would be indicated in every case where the patient was not apparently about to die, because of the inevitably fatal result if he be not operated, the proportion of recoveries after operation fully justifying and demanding that he be given the one chance in about three for his life. If, however, the infection be of tubal or appendix origin and the peritonitis diffuse with a profound effect upon the heart and kidneys and other vital organs, it matters not how much or little time may have elapsed since the onset, that patient stands a better chance for his life without operation than with it and in my opinion

* Read at the meeting of the Denver and Arapahoe County Medical Society, Feb. 25, 1902.

such a case should be pronounced inoperable. Occasionally, though very rarely, such cases recover after operation, but always in spite of it and not because of it. The many untimely operations on such cases, with the frightful mortality attending them, is largely responsible for the prevailing public opinion that such operations are usually fatal. The newspapers invariably announce death from the operation and not from the disease. Without operation such patients' chances are unquestionably better and if they must die the surgeon is relieved of the unpleasant odium of contributing to that end, and the rule of "the greatest good to the greatest number" is observed, inasmuch as patients presenting conditions favorable for operation will not be deterred by false notions of its gravity. Patients must learn that it is the disease that kills and not the operation and they can be so taught only by the performance of operations on operable cases and the treatment of inoperable cases by other and far better methods.

If we accept the pathology of these grave cases as I have outlined it and apply the facts to the treatment of diffuse peritonitis, some radical changes must be made in our views of the medical treatment as well as in our opinions of the saving virtues of the knife. If we admit that localizing and circumscribing an infected focus or even a considerable area of infected peritoneum is favored by the physiologic rest of the abdominal viscera and that freedom from motion and commotion in the peritoneal cavity predisposes to limitation rather than diffusion of the disease, we must adopt those means that lead to that end.

To Dr. A. J. Ochsner, Chicago, is due the credit of formulating and proving in practice the rational treatment of these terrible cases of diffuse peritonitis, cases that we must learn to pronounce inoperable as I have suggested. Ochsner's "Chairman's Address," delivered before the Section on Surgery and Anatomy at the 52d annual meeting of the American Medical Association and published in THE JOURNAL A. M. A. of June 22, 1901, states his position clearly and I beg leave to quote such passages as seem to lend force to this plea for its wider acceptance and adoption as the best method of treatment for such conditions. He says:

"It is a fact which has been demonstrated a great number of times that peristalsis does not occur unless food or cathartics are introduced into the stomach. * * * *

"Theoretically then, the disturbance which is to be feared to so great an extent is caused by the presence of food or cathartics in the stomach and its logical remedy would be to absolutely prevent the introduction of any form of food or cathartics into the stomach, and the removal by gastric lavage of any portion of food which may be retained in the stomach at the beginning of the attack.

"It may be necessary to perform gastric lavage twice or at most three times in order to entirely remove remnants of food which may have regurgitated into the stomach from the small intestines by reason of return peristalsis. * * * *

"It is true that a few surgeons have reported failures with this method, but an investigation of their treatment in each instance has shown that they disregarded one of three cardinal points in the treatment. They either gave just a little liquid food by mouth, or they gave some form of cathartics, or disturbed the rest of the intestines by giving large enemata, or they neglected removing the stomach contents by gastric lavage."

From his conclusions we may abstract the following as being most important:

1. Peristaltic motion of the small intestines is the chief means of carrying the infection from the perforated or gangrenous appendix to the other portions of the peritoneum, changing a circumscribed into a general peritonitis.

2. This can be prevented by prohibiting the use of every kind of food and cathartics by the mouth and by employing gastric lavage in every case in which there are remnants of food in the stomach or intestines above the ileo-cecal valve, as indicated by the presence of nausea and vomiting or meteorism.

3. The patient can be supported by the use of concentrated predigested food administered as an enema, not oftener than once in four hours and not in larger quantities than four ounces at a time.

* * * *

6. In all cases of this class, gastric lavage should be practiced in order to prevent the absorption of decomposing material from the alimentary canal.

* * * *

11. The treatment does not protect the patient against a subsequent attack.

12. It does not contra-indicate the removal of a diseased appendix before the septic material has extended beyond this organ.

13. It is indicated in all intra-abdominal conditions in which it is desirable to prevent the distribution of septic material by means of peristaltic motion.

14. The laity should be taught to stop feeding and giving cathartics to patients suffering from intra-abdominal diseases.

His results are conclusive; he reports:

"From Jan. 1, 1898, to May 1, 1901, I have operated upon 565 appendicitis cases which I have divided into three groups: 1. Those who enter the hospital suffering from diffused peritonitis. 2. Those who enter the hospital suffering from gangrenous or perforative appendicitis. 3. Those who enter the hospital suffering from recurrent appendicitis in the interval between attacks or at the beginning of a recurrent attack when the infectious material was still confined to the appendix. Of the first class I treated 18 cases with 10 deaths, 55.5 per cent. mortality; of the second class I operated on 179 cases with 9 deaths, 5 per cent. mortality; of the third class I operated on 368 cases with 1 death, one-third per cent. mortality; total 565 cases, with 20 deaths, 3.5 per cent. mortality. These statistics contain all patients who entered the hospital suffering from appendicitis, even those who died a few hours after admission from general peritonitis."

These statements are so clear, the conclusions so logical and the statistics so conclusive that it would be "painting the rose" to attempt to embellish them. I desire to add, however, that in the few cases in which I have had the opportunity to try Ochsner's plan of treatment the results have been most gratifying.

I wish to cite the case of a patient recently seen and so treated. This lady had a history of an old pelvic infection of tubal origin with a number of acute exacerbations in which she had been very ill, but never so ill as now. She was a patient of Dr. John C. Graham, with whom I saw her at St. Joseph's Hospital. Her temperature was 103.3 and pulse 130. The character of the pulse was bad. She was enormously distended, vomiting constantly a brownish fetid fluid with a distinct fecal odor, and the tenseness and tenderness of the whole abdominal wall was extreme. Her eyes were rolled up and her expression was that of one with but a few hours to live. I pronounced the case inoperable and urged the institution of the Ochsner treatment, starting in at once to wash the stomach and get rid of the fearful depressing effect of the toxemia incident to fecal regurgitation, for in my judgment this persistent nausea, depression and toxemia is in many instances quite sufficient of itself to determine the fate of the patient. The lavage had to be repeated. Absolutely nothing was permitted by mouth; rectal feeding was begun, and sharp hypodermic stimulation with strychnia and atropia was maintained. The results so far as

pulse and temperature were concerned were prompt and good, but the greatest improvement noticed was in the early disappearance of pain, vomiting and nausea, of tenseness, tenderness and distension over the abdomen and of the restlessness and anxiety so painfully evident in every movement and look. She recovered and is now about ready for an interval operation which offers her every possible prospect for health and longevity.

I must add just a few words condemning two drugs frequently prescribed in peritonitis: 1. I desire to endorse absolutely all Ochsner says about the harmful effect of salts in this disease and, judging others by myself, I take it that the habit of starting the treatment of these conditions with salts will be the hardest lesson the physician will have to unlearn, for that plan is part and parcel of the fixed routine of 95 physicians in 100. It will be even more difficult to impress the laity with the importance of leaving off the salts. 2. Opium, as frequently ordered, is also to be condemned. It does arrest peristalsis, to be sure, and some of you will say that it favors the very objects I seek; but unfortunately it does much more and in those respects its effects are so supremely injurious that the sum of its action is far from good. The point of this matter is, however, in the fact that, if the lavage and absolute fasting are maintained, both the salts and the opium are quite unnecessary, as the intestinal and stomach contents are removed and the peristalsis arrested by a better, simpler and far safer proceeding. This does not preclude the moderate use of morphin and codein hypodermically for the relief of pain, anxiety and restlessness in the early stages of the disease and its treatment, but if the lavage, fasting and avoidance of cathartics is strictly maintained the necessity for anodynes is soon past.

SUMMARY.

1. The treatment of septic peritonitis by surgical measures on the one hand or by rational medical measures on the other must be determined in each case first through a carefully-made differential diagnosis as to the source of the infection; second, through an estimate of the apparent virulence and diffusion of the infection, and third, through consideration of the elapsed time since the infecting material was injected into the cavity.

2. Infections from the intestines, vermiform appendix and oviduct are apt to be dangerous in the order given, because of the relatively greater mobility of the first and then the second and third, and of the greater relative distribution of their contents, which favors and promotes diffusion of infection and prevents plastic closure of the leaking viscus.

3. Physiologic rest of the intestines favors limitation of the area of peritoneal involvement and the saving of life, and is best attained by the maintenance of an empty bowel and the avoidance of cathartics; this means lavage, fasting and no salts.

If enemata are used for clearing the rectum, as may be required, they must be small in amount and injected with the utmost care from a low bag.

4. Cases of diffuse peritonitis with profound local and general symptoms must be regarded as being inoperable, inasmuch as the interests of the patient and the requirements of good surgery both demand that untimely surgical measures be not employed where better results may be had with simpler and safer ones.

5. Early operation, before diffusion has taken place, is safe and in most instances to be advised if the environment be favorable and an experienced surgeon at hand. Interval operations are certainly advisable after recovery from a diffuse peritonitis from any source.

THE NEUROSES OF THE HEART.*

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In presenting for your consideration the subject of functional heart affection, I have a two-fold object in view: First, to illustrate by appropriate cases the undoubtful forms of heart neurosis, and secondly, to call your attention to borderland conditions where we are frequently in a quandary as to whether the case would be classified as myocarditis or whether the cause lies in a functional disturbance of the nervous mechanism of the heart's action.

The subject of myocarditis and its clinical phenomena have lately been the subject of much discussion and the chronic form at least is of much interest to us, especially in our office practice where it often is important to know, and difficult to determine whether a given irregularity of the heart is of organic or functional origin. In the same way, when diseases of the muscular walls or of the valves do not enter into consideration at all, it is often impossible to determine whether the nervous derangement of the heart's rhythm is of an organic or functional character. If we omit from our consideration the subject of fevers and direct chemical poisons affecting the heart, we will render the subject more circumscribed and at the same time not detract from the interest in the matter. Various factors are essential to a normal condition of the heart's action. The muscles must be sound, the valves normal, the nervous mechanism perfect, and the heart must be in its usual position. When any one of these conditions is altered, the heart's action becomes changed, irregular, rapid, slow, tumultuous.

A nervous affection of the heart is caused by a faulty condition of the nervous system locally in the heart, the nerves leading to the heart, their center in the medulla, or by what is more frequently the case, by a derangement of the nervous system as a whole, such as we see in neurasthenia and hysteria.

The nervous ganglion system of the heart may be the central point of the disease, and according to Krehl, although this is still in doubt, future investigation may confirm this idea. The nervous condition of the heart is surrounded, as a rule, by all of the general and special signs and symptoms of neurasthenia and hysteria, but sometimes it is the only symptom. In order to understand the neuroses of the heart it is necessary to give a brief survey of its physiology. Twenty years ago the physiology of the heart was looked upon as a closed chapter; the Traube theory was universally satisfactory. He taught the two-fold action of the heart: *a*, the muscular motor system, *b*, the regulator system, viz., the accelerator influence of the sympathetic and the depressor influence of the vagus. To say that the theory is overthrown, at least in part, is to give you old news. Gaskell, Woolbridge and Tigerstead were the first to show that the experiments on which muscular theory was based were faulty, but it remained for His, Jr., Romberg and Krehl to put forward and apparently substantiate the theory of the autonomy of the heart. Engelman in a complete paper gave the theory its present standing. The myogenic theory of the heart's action is critically reviewed in an admirable paper by Leyden. It teaches that the heart is practically one muscle fiber with the power of automatic action. The ganglion cells and all the nerve fibers of the heart are sensory in char-

* Read at the Cincinnati Academy of Medicine, Dec. 16, 1901.

acter. Carl Huber of Ann Arbor in an admirable paper which has the support of Waldeyer, tries to show that nerve fibers do enter and terminate in the nerve fibers of the heart by a small knob-like termination. But the consensus of opinion is against this theory. While the heart is rich in sensory fibers and ganglionic cells there are no motor fibers, no motor centers; the first decided blow to the neuron theory. The motor stimulus comes from the blood itself, perhaps from the chlorid of sodium alone. Kronecker, who had performed an experiment of pricking the center of the heart just below the aortic valves and thereby throwing the former into an irregular and tumultuous action, and finally causing it to stop altogether, seems to have found a motor center. But the most careful investigation, however, failed to reveal any accumulation of cells or nerves in this locality, and as long as ten years ago at the Berlin International Congress he explained the result by the irritation of the vasomotor nerves of the coronary artery. While the rhythm of the heart's action is automatic, this can be increased or diminished by influences, chemical, physical, or psychical in character, coming either through the sympathetic nerve or from the vagus.

We can divide the neuroses of the heart into three divisions: 1, neurasthenia cordis; 2, tachycardia; 3, bradycardia.

NEURASTHENIA CORDIS.

Under the head of neurasthenia of the heart various manifestations are seen. We have: *a*, typical neurasthenia of the heart, *b*, arrhythmia of the heart, *c*, pseudo angina pectoris, *d*, nervous bruit. Of these conditions, the neurasthenic heart is the best known and the most frequently encountered. This condition of the heart rarely occurs as the only sign of the neurasthenia. It is the local manifestation of a general condition. The neurasthenic condition being present, no matter what the cause, the local phenomena on the part of the heart are usually the product of the psychic influences. The most frequent condition which we see is the cardiac hypochondria, fear of heart disease. It is usually based upon the local precordial sensation produced by palpitation, irregularity or pain. Fear is the predominant psychic element of neurasthenia and the fear of heart disease is often combined with a marked disinclination to examination for fear of having apprehensions confirmed by the physician.

Palpitation, while frequent, is not an invariable sign of a neurasthenic heart. Its origin is often chemical or mechanical, due to displacement by a distended stomach. But when it is accompanied by a sense of fear and anxiety, I should say that it is at least associated with a general neurasthenic condition. Palpitation may occur without any cause whatever, often in the middle of sleep. It is associated with precordial distress, varying in degree from a slight pressure to pain so crucial and severe as to simulate angina pectoris. At the same time there is great mental distress, a pallid, moist countenance, and facial expression of great anxiety. At times the palpitation and precordial anguish is associated with a sense of constriction in the throat, a sense of strangulation which makes the patient jump from the bed, often from a deep sleep, into the middle of a room, uttering guttural noises or rushing to a window and throwing up the sash for air. These attacks come on suddenly and last from a few minutes to an hour or more. These paroxysms are only one phase of the neurasthenic heart. In some cases the heart is constantly twenty to thirty beats above the normal and there is a sense of dissatisfaction with the breath taken, a constant effort to breathe deeper and a feeling that relief would be attained if a deeper inspiration could be made. This dyspnea may last for hours, days, or even weeks, the only relief being obtained by sleep.

The typical neurasthenic heart is weak, irritable and easily exhausted. When at rest the pulse is normal, but the slightest exercise, such as stepping up two or three steps to a platform, will raise the pulse rate from twenty to fifty beats per minute without any discomfort to the patient. In less than a minute after the patient has come to a halt, the pulse rate returns almost to normal. The same result is often produced by psychic influences, by coming into a physician's office and being examined. The sphygmographic tracing will show this weakness and irritability of the heart. The worst case of neurasthenia that ever came under my observation was a blacksmith, who worked daily at the forge for a whole year while he was under treatment. His pulse was so irritable, weak and rapid that the mere walking into the clinic in the presence of the students raised his pulse rate to 120 or more. This shows that there are exceptions to the rule. Just as irritable weakness, whether in the mental or physical sphere, is the characteristic of neurasthenia, so it is also of the neurasthenic heart. Krehl raises the question whether nervous affection can produce changes in the size of the heart. If so, how often and to what extent, and can it produce hypertrophy or dilatation? We might answer at once that when hypertrophy and dilatation are present there is an organic heart lesion, a diseased condition of the muscle itself. At present, however, there can be no certainty upon this point, principally because autopsies in nervous subjects are exceedingly rare. Krehl says that he has seen dilatation of the heart especially in masturbators and that with a cessation of the habit the dilatation has disappeared. He has also seen dilatation occur in ordinary neurasthenic paroxysms and disappear with the cessation of the attacks. Theoretically the explanation is very plausible. It is well known that an irritation of the vagus nerve has marked influence on the tone of the heart muscle. Why should not psychic influences have the same effect, the dilatation being the result of diminution of tone. Krehl is not so positive about the occurrence of hypertrophy; he thinks that he has seen it, but does not wish to place himself on record because of the difficulty of diagnosing small degrees of hypertrophy. Before the diagnosis of dilatation or hypertrophy can be made in neurosis of the heart, we must carefully exclude all organic lesions and must likewise bear in mind that we may have at the same time both an organic lesion and a neurosis. It is well to remember, however, that we may have as a result of simple neurosis of the heart undoubted dilatation and perhaps hypertrophy.

ARRHYTHMIA CORDIS.

In palpitation of the heart under the influence of psychic emotion, there is frequently not only an increase in the rhythm but there is a decided irregularity both in the rapidity of the action as well as in the occurrence of intermissions, and when the heart quiets down again we have a regular rhythmic pulse. In arrhythmia, on the other hand, we have a pulse that is irregular in rhythm, as well as intermittent, in the absence of all excitement, psychical or physical. Kronecker's experiment seemed to indicate that the cause of the irregularity in nervous patients may be due to some vasomotor disturbance of

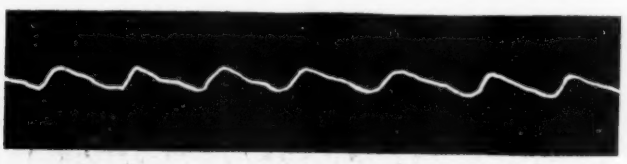
the coronary circulation. Directly or indirectly, no matter how, the cerebrospinal system regulates the force and frequency of the heart, but the rhythm is the peculiar inherent automatic quality of the heart muscles and nerves. The most frequent cause of arrhythmia therefore is either a diseased condition of the coronary arteries or myocarditis. There can, however, be no doubt that we frequently find arrhythmia as a functional affection of the heart. Husley has shown that even in apparent health. variations not at all physiological occur, but marked arrhythmia to the point of intermitting is always pathological. The nervous heart may be intermittent; we may have a pulse bi-geminus, or trigeminus, or delirium cordis. All of the cases that I have seen have been neurasthenia with marked vasomotor disturbance. The great difficulty in neurasthenia lies in excluding myocarditis or organic nervous trouble. Certain cases had been diagnosed as Graves' disease but this was held to be untenable because of the irregularity of the heart, and of the fact that at times the heart's action was reduced to 80 beats or less per minute which never occurs in the former affection. The sphygmographic tracing of Graves' disease with a pulse rate of 130 will illustrate the difference in the two conditions. The rhythm of the heart is always perfect in Graves' disease. Myocarditis and disease of the coronary artery must be ruled out and this can only be done with great difficulty, especially in the start. We must rule out all acute diseases which might have caused myocarditis and arteriosclerosis.

Normal pulse.

Krehl lays much stress on allorhythmia, viz., an intermittance every fourth, sixth or eighth beat, recurring regularly. The intermittence of myocarditis occurs with great irregularity. In nervous arrhythmia there is a marked consciousness of the irregularity, which is usually absent in organic heart trouble. Arrythmia of nervous origin sometimes disappears under excitement, while bodily exercise invariably increases the irregularity in myocarditis. Myocarditis is, as a rule, associated either with hypertrophy or dilatation, whereas in arrhythmia it is the exception. We must remember, however, that patients with myocarditis may have neurasthenia, and very often the same cause which produced the neurasthenia may also produce a myocarditis, e. g., influenza. In cases of this kind, time alone will clear up the doubt. Neurasthenic patients may have arteriosclerosis and this may complicate the diagnosis. Each and every symptom and sign should be carefully weighed in the balance and even then we may remain in doubt as to the exact nature of the arrhythmia. We can see the importance of a careful diagnosis by the bearing which it has on the treatment, for in neurasthenia an outdoor life is demanded and a gradually increasing amount of exercise, which may prove fatal to the case of sclerosis of the coronary artery or myocarditis.

NERVOUS ANGINA.

The nervous ganglia and nerves of the heart are, according to present teaching, purely sensory and therefore we may have in the heart, in addition to the other disturbances of sensation, distinct pain. This pain may occur in paroxysm, simulating neuralgia, or it may be more or less constant with periodic exacerbations lasting from minutes to hours. This pain now and then occurs independently of any organic heart trouble and is known as nervous angina pectoris. There is no better authority than Romberg and he holds, in view of the many negative autopsies, that angina pectoris is always a neuralgia of the heart, that aortic stenosis and sclerosis of coronary arteries are merely contributing causes. There is even much dispute as to the seat of pain, the vagus, sympathetic, phrenic, intercostal nerves and the spinal cord having been looked upon as the seat of pain by undoubted authorities. I have seen one case of mild alcoholic brachial neuritis of the left arm which was associated with periodic attacks of precordial pain, radiating into the shoulders, which Oppenheim of Berlin saw with me and confirmed the diagnosis of pseudo angina pectoris. Prolonged rest and withdrawal of alcohol has up to the present time relieved the attacks. We are on very uncertain ground when we view the pathology of angina pectoris, and whether we hold the theory of coronary disease, of neuritis or neuralgia, we have undoubted authority to uphold us in our opinion. The most widely accepted view, however, is that true angina is caused by organic changes and most frequently by atheroma of the coronary artery. Angina pectoris, like tachycardia and bradycardia, is a symptom and not a disease. My object is not to treat of angina as such, but merely a pseudo-angina occurring in neurasthenia, which has a very close resemblance to the true form.



Normal pulse, case of brain exhaustion.

Whittaker says with truth that precordial pain, no matter how great its severity, does not constitute angina. We must have associated with it dyspnea, great anguish, mental anxiety and the fear of impending death. The cardiac crises of locomotor ataxia are purely neuralgic in character. We may have mild attacks of reflex angina arising from various disturbances of the liver, pelvic and gastro-intestinal canal. When angina is seen in alcoholic patients, I should hesitate to make the diagnosis of a purely functional neurosis. We may have a neuritis or even coronary arteriosclerosis. Tobacco, tea and coffee may produce attacks of pseudo-angina.

Since pain alone, its intensity, location and duration are the same for true angina as for the false we must look around for some differential point. True angina usually occurs in individuals who have other evidences of organic heart lesions, muscular or valvular. False angina occurs in individuals who are neurasthenic or hysterical. In the attack this point will not avail much, but outside the attack, in the interval, it matters a great deal.

Huchard gives the following points: First, every angina produced by an effort of any kind is true angina. Second, every angina which occurs spontaneously is false angina. Third, an angina which occurs in the night, though independent of effort, is a false angina. Nervous patients are not quiet during an attack. They walk up and down from chair to lounge, from lounge to bed, wringing their hands, lamenting and crying. The attack might be associated with other signs of neuras-

thenia, as palpitation of the heart. Areas of anesthesia may be present. Pain may affect the whole left side. Neurasthenic cases are often associated with typical neurasthenic breathing. Most functional, reflex or neurotic anginas occur in young individuals; true angina in the old. Hysterical attacks of angina are often associated with typical hysterical mania, in which delusion of the senses of sight are very frequent, always being absent in true angina.

BRUIT AS A NEUROSIS.

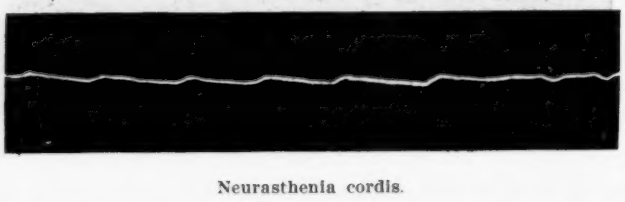
Can a purely functional change in the rhythm of the heart produce a bruit? We see bruit frequently in the

Neurasthenia cordis.

various forms of anemia and in chorea and attribute it to the quality of the blood. But what ground have we for this assertion? If it be true, why do they not occur in all cases of anemia? Is it not just as probable that in these cases there is some disturbance of the mechanism of the heart, which produces the bruit or some anomaly in the muscular contraction which leads to a temporary faulty closure of the valves?

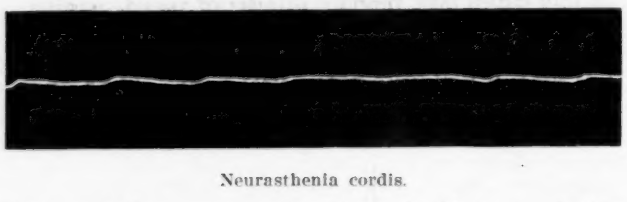
The following is a case of nervous bruit:

Mr. G., age 41, married, three children, has always been



Neurasthenia cordis.

healthy. No evidence of venereal disease, never sick, is applying for life insurance, was examined by Dr. Minor and myself at patient's office. On examination of the heart, a loud bruit was heard, even before the ear or the stethoscope was applied to the chest. It could be heard at least an inch from the chest. The heart was found normal in size and location. Its action was strong, somewhat rapid, pulse 100. Second sound slightly accentuated. The examination in other respects perfectly normal. Patient seemed only slightly excited. Urinalysis negative. Insurance refused. Second examination made in my office.



Neurasthenia cordis.

Heart perfectly normal in size and sound. No bruit. Patient attributed the disturbance at the examination twenty-four hours before to a dinner which he had attended on the night previous. On demand of applicant, the medical director of the insurance company came from New York and a joint examination was made after a lapse of ten days, the heart was again found normal, and the insurance granted in full amount.

It is difficult to explain, and we have not the time to go into details concerning the numerous theories that have been advanced, to explain the nervous derangement of the mechanism of the heart action.

Krehl, Martius and others look upon the result of physiological experiments on animals and their application to the human heart with much distrust, not to say contempt. Very little reliance is placed by them upon the direct influence of the vagus and sympathetic nerves in the production of derangements of the heart's action. The whole subject is still in obscurity, but they seem to lay more weight upon the ganglionic system of the heart itself as the seat of all disturbances of action. Barker believes that the experimental and fetal researches of His, Jr., and Romberg have found a satisfactory anatomical basis of the physiology of the nerves of the heart and a starting point whence perhaps those puzzling clinical problems in connection with the cardiac neurosis may be advantageously approached. His, Jr., in his illustration of the ganglionic system of the heart, has likewise shown a wonderful blood supply of the ganglionic system. "Every ganglion is surrounded (as Whittaker so beautifully puts it) by a thick network

Neurasthenia cordis.

of small blood vessels and numerous branches penetrating into its interior. Thus the heart ganglia are in no sense degraded by being denied the office of presiding over the motion of the heart. They have the higher one of perceiving the first influence of failing nutrition or toxic impression."

The neuroses of the heart are, as a rule, found in those forms of neurasthenia in which the vasomotor disturbances are most common. Patients with cold, moist hands and feet, with bluish-red discoloration of the skin of the extremities, the tache spinal, the pallid, easily flushed faces, are the ones who most commonly have the cardiac disturbances. It is not difficult to understand that if the arteries and veins surrounding the cardiac plexus are in the same state of passive distension and sluggish activity, how readily all the neuroses of the

Neurasthenia cordis.

heart can be explained on the ground of a deficient nutrition, producing a changed activity of the cardiac ganglia.

The prognosis and treatment of neurosis of the heart are essentially the same as in neurasthenia, the discussion of which we will not be able to enter here.

TACHYCARDIA.

Nothnagel, Bouveret and Martius have made known the symptom complex, which we designate as essential tachycardia. Tachycardia is a symptom of various affections and not a disease; it occurs in a moderate degree in various organic heart affections; in any disease of the neck or mediastinum compressing the vagus; in central disease of the medulla and in poisonings. But it occurs also under circumstances in which it is the essential symptom of a paroxysmal attack, which has come to be recognized as a distinct affection occurring periodically in individuals otherwise well. In its true form

it has to be encountered but once to dispel any doubt as to its right to a separate classification. Real tachycardia occurs in individuals who are, to all intents and purposes, well between attacks. In others there has been found a nervous diathesis without there being present any marked hysteria or neurasthenia. The attack comes on suddenly, the individual feels a sensation of a sudden start or a darting pain in the chest, then a sense of fatigue, fear and anxiety. He goes to bed and lies perfectly quiet, but when the attack lasts a long time, there is more or less restlessness. Oppenheim, however, reports one case with exceedingly high pulse, the patient being able to go about his business and even walk for miles in an attack. The main symptom is the pulse and the pulse rate. I should say from the few cases that I have seen, that in genuine cases the pulse rate is never below 160, usually between 180 and 220 and Krehl says, as high as 300 per minute. The pulse is weak,

Case of obesity in young woman—no neurasthenia.

feeble and small. The heart's action is feeble and the impact against chest wall scarcely perceptible. Binswanger, however, reports a case with a pulse rate of 150, pulse hard and with strong impact against the chest wall. The heart sounds are clear, but so rapid as to be almost indistinguishable. There is no bruit. The presence or absence of dilatation of the heart is a much discussed question. I have seen one case with acute dilatation of the heart in which there were all the symptoms of the typical paroxysmal attack of tachycardia. In the other two cases reported below, I was unable to find any dilatation. Martius claims that dilatation is always present. Krehl says that it is not and that he has seen cases in which it was not present. There seems to be an agreement among authorities, however, that muscular weakness and loss of muscular tone is an

Pulse tracing one hour after admission, October 10.

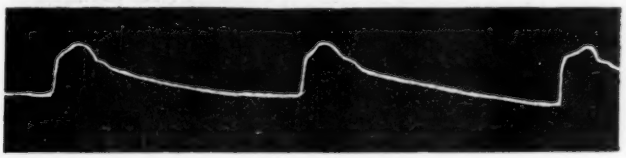
essential condition of the attack and Krehl argues that if this is the case, theoretically at least, it would not be improper to imagine that an acute dilatation does occur and that while it may be hard to detect by percussion, it is very important to bear this in mind in making a prognosis as to the individual attack. The whole discussion, however, proves the first statement of this chapter, viz., tachycardia is a symptomatic manifestation of various conditions. The following three cases will illustrate the various conditions under which this may occur:

Miss L., age 29, single, dressmaker. Mother well, father dead, was nervous. Has one brother who is a periodic drinker, who is nervous and hysterical. Patient has always been well, has worked hard and steadily at her occupation, has always been of a nervous temperament. Present trouble began two years ago. The attack always begins with palpitation of the heart, a feeling of oppression on the chest, difficulty of breathing, great anxiety, restlessness, and much physical exhaustion. First attacks lasted but a short time, never more than a half hour, returning at intervals of a month. Each succeeding attack was longer and more severe. During the last year it was always necessary to administer a hypodermic injection of apomorphia, which would put an end to the attack. The last few attacks have lasted from three days to a week, during which period patient was confined to bed. On Dec. 5, 1899, I was called to see this patient. The attack has already been in existence for three weeks. It began suddenly like all the previous attacks with the following symptoms: Sudden feeling of oppression in cardiac region with sense of great palpitation. Intense apprehension, restlessness, pallor and dyspnea. Unable to sleep, unable to eat, vomits frequently. The violent palpitation has stopped but twice in three weeks and only for a few hours at a time. Examination: Patient is very pale, lips white, eyes sunken, with fear, anxiety and restlessness on the face. Complains of violent action of heart and the feeling of suffocation. Action can be seen through chest wall; the apex beat is normal; no bruit can be detected. Pulse is over 200 per minute and usually so rapid that it is impossible to count it. No hyper-

Taken five seconds later than preceding chart.

trophy or dilatation. Radial pulse very thin and rapid, not compressible. No enlargement of the liver, no disturbance of the peripheral circulation. In previous attacks hypodermic injections of apomorphia gave prompt relief, but in the present attack none. In the sixth week the patient had a sudden attack of right side hemiplegia with difficulty of pronunciation. In the course of a week the hemiplegia improved, but there was no change whatever in the tachycardia. On the seventh day after the onset of hemiplegia, the patient suddenly died. It will be seen that this was an extraordinary case of tachycardia. The early attacks seemed to be essential, but judging from the fatal termination, preceded by the hemiplegia, there must have been a bulbar lesion which produced both the tachycardia and the sudden death. No autopsy could be obtained.

CASE 2.—Infant, age 7 months. Parents are both healthy. Has one older sister and brother, both well. Has been well since birth. Three days ago had an attack of gastro-intestinal



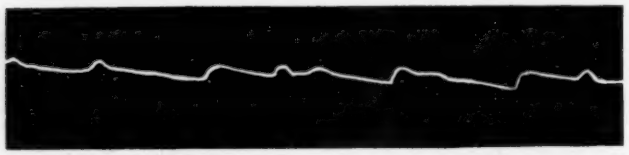
Taken October 14.

disturbance. Vomiting and diarrhea. Bottle fed. Temperature 100, pulse 100. I was called at midnight. Child collapsed suddenly. The face is pale, the lips somewhat blue and cyanosed. Is unconscious. Eyes half open, respiration 48. Radial pulse at times absent, at others, faintly felt, very small, thready, easily compressed. Heart normal in size. Heart's action varies from 180 to a frequency at which it can not be counted. The liver is markedly enlarged. The body generally pale and limp. Salt water injection made hypodermically. Very little improvement. Injection of 1/180 gr. strych. sulph. gave prompt relief. Child recovered consciousness, pulse becomes stronger, 120 per minute. In 24 hours a similar attack. This, however, continues 12 hours, the pulse being constantly 180 and over per minute. Child unconscious, in state of collapse. Tendency to convulsions, with a scarcely detectable radial pulse. During the next two days has two similar attacks of short duration with recovery. The treatment in this case consisted of many neutral saline injections with three doses of strychnia strophanthus 3/4 gr. every 3

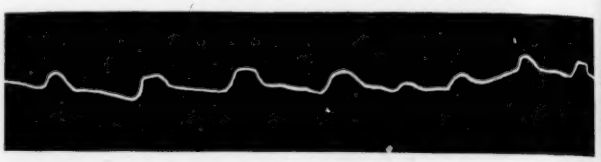
hours and ten doses of calomel gr. 1/20. Diagnosis, acute dilatation of heart.

CASE 3.—Mrs. K., age 58, married, four children, has bad attacks of illness. For the past few months has been more nervous than usual. Has been under treatment for nervous indigestion. Complains of violent heart's action and a sense of prostration, great mental distress and fear of death. Her face is somewhat flushed and has an anxious expression. No pain. Pulse weak, small, thready, 190 per minute. No bruit, no enlargement. Gave seidlitz powder and potassium bromid gr. 30 every 3 hours. In four hours no relief. While sitting at bedside, without any apparent cause, the pulse suddenly dropped from 180 to 78 beats per minute. This change took place instantly. Has had in all three attacks. The second attack lasted twelve hours, the third, three hours. In each attack the relief came spontaneously. Last attack five years ago, since which time patient has been comparatively well, with the exception of more or less neurasthenia.

It is important in the individual case to determine the cause of the attack. Myocarditis is very often the cause

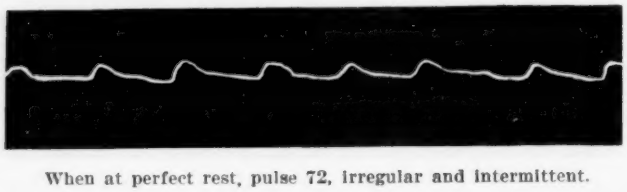


Case A.—Arrhythmia—irregular, violent, intermittent.

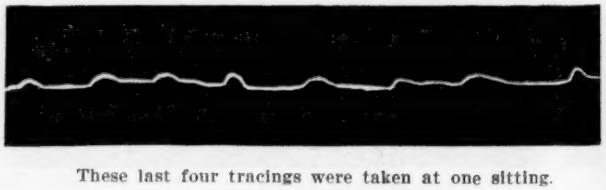


In paroxysms of palpitation, pulse goes as high as 140 per minute.

of tachycardia. In most cases there is some disease of the valves, coronary arteries or muscles, even dilatation or neuritis. While this is easily apparent on the autopsy table, it is very difficult to find during life. In essential tachycardia there is an absence of all indications of disease of the heart or nervous system in the intervals. In the attack we may find dilatation, but whether this is the cause or the effect is a matter of dispute. We must always remember the great difficulty that exists of diagnosing the slight deviation from the normal, either in the vessels or in the muscles of the heart. Martius says that all the attacks of tachycardia are the direct result of dilatation of the heart. Krehl takes a middle standpoint. The dilatation often follows the onset of the attack, may even be the cause, but is often absent. With Romberg he holds that the cause



When at perfect rest, pulse 72, irregular and intermittent.



These last four tracings were taken at one sitting.

is to be looked for either in a spasm or in a diseased condition of the coronary arteries, in a derangement of the nervous mechanism of the heart itself, and not of distant nervous system.

The diseased condition of the heart itself, viz., of the muscles, valves and arteries, can, at most, be only a predisposing cause, for, with the enormous frequency of the latter condition, tachycardia should be a very common instead of the rarest of cardiac affections.

Oppenheim has called attention to a group of symptoms which he says is due to irritation of the sympathetic nerves of the heart and of which tachycardia may be the most prominent symptom, viz., dilatation of the pupil on one side, wide separation of the eyeballs, pallor and reduction of the temperature of the face, with tachycardia. In making the differential diagnosis between essential tachycardia and that dependent upon disease, we must especially during the interval look for all those signs and symptoms which may point to an organic lesion of the muscles of the heart, general arterial sclerosis, disease of the medulla oblongata or the occurrence of one of the acute infectious diseases which might have caused a neuritis of the vagus nerve. Whittaker says the irregularity of the pulse during the attack would be an indication of dilatation of the heart. Fraentzel says that tachycardia due to irritation of the sympathetic can be cut short by morphia and that produced by vagus affection by pressure on the vagus (Whittaker).

BRADYCARDIA.

This is exceedingly rare as a nervous affection. The bradus signifies slow—a slow heart. Bradycardia usually signifies a stenosis of the aortic valve, often complicated by myocarditis chronica or coronary artery sclerosis. There are at present two cases in the Cincinnati Hospital with pulses respectively of 32 and 36, both cases being of organic nature. In the clinical records of the Cincinnati Hospital I have been able to find one case in the past ten years, also organic in character. A slow pulse of 60 or 64 is very rare, however. One of my patients who has been a neurasthenic for the past 20 years has a pulse habitually of 54 or 56. This patient has very marked attacks of palpitation and all the other manifestations of neurasthenia cordis, but only in paroxysmal attacks which occur at intervals of months, induced usually without cause, but at times by indigestion. The attack is invariably attended and followed by the fear of having organic heart disease, which is invariably dispelled by a formal examination and a positive statement to the contrary. Still I would not like to classify this case as one of bradycardia.

I have seen another case of slow heart in a neurasthenic with periods of intermittent pulse, rate 60, in which no cause but a psychic one, the fear of heart disease, could be found. The intermittent pulse was present for a period of months. Tobacco was alleged as a cause, but its withdrawal or its continued use seemed to make no difference in the attack. We can also rule out myocarditis in this particular case. I have known him for seven years and he is still in good health with no evidence of organic lesion. I should look upon these two cases as unusual, because they occur in neurasthenia. Another patient now under my care for insomnia, fear of insanity and general nervous and physical exhaustion had a pulse of 54 for 10 days. At present it is normal.

Physiological bradycardia is seen often. Napoleon is said to have had a pulse of 40. Ruhlin, the pugilist, is said to have a pulse of 44, even after exercise. Bradycardia as a sign of organic heart disease or as a symptom of organic brain or cervical myelitis or injuries to the chord in the cervical region is not infre-

quent, but as a neurosis pure and simple it is exceedingly rare. Bradycardia is most frequently encountered in stenosis of the coronary artery. The bradycardia seen after the acute infectious diseases are probably due to mild myocarditis, while that always seen in conjunction with jaundice is probably due to the direct action of the circulating bile on the heart or on the nerve centers.

Reflex bradycardia is usually seen in gastro-intestinal disturbances and this is due to disturbance of the splanchnic circulation, throwing increased pressure and work on the heart. Attacks of bradycardia are described by nervous patients very frequently. These attacks are paroxysmal, not like tachycardia, but have more the character of palpitation or they may be associated with palpitation. The general signs are those of precordial pressure, anxiety, a sense of constriction, fear of suffocation and a subjective feeling as if the heart were beating very slowly and forcibly, combined with the fear of

Case of exophthalmic goiter, pulse 130, heart's action rapid, rhythm and strength normal.

its stopping altogether. The extremities become cold, the face pallid and covered with perspiration. In other cases there is distress in the stomach, nausea, retching, vomiting and subsequent collapse (Whittaker). The attack comes on suddenly and ceases suddenly. In milder cases there is simply abdominal distress, tenesmus, at times diarrhea. Sometimes bradycardia is associated with pain, which simulates very closely that of angina pectoris. Bradycardia is at times complicated with epileptiform convulsions. Whittaker says that these convulsions may be due to brain anemia, but he believes that the bradycardia and the epilepsy in the given case are both due to the same arrangement of the central nervous system. Before we can make the diagnosis of nervous bradycardia we must rule out all or-

Case of irritable, neurotic heart: pulse at rest, 80; under excitement, 130. Pulse regular and rhythmic, but action weak. Strong, muscular man.

ganic disease of brain, cord, heart or distant organs. The prognosis of functional bradycardia upon a neurasthenic brain is not unfavorable.

The treatment of bradycardia of a functional character is identical with that of neurasthenia. In the paroxysm we can use the various sedatives, bromids, asafetida and valerian.

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ACUTE CONGESTIVE OR INFLAMMATORY GLAUCOMA.*

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Not long ago I was asked by a medical practitioner to see an old lady who had for some days been suffering from a bilious attack, and who, since the day before, was nearly blind. He thought, as the eye seemed to be pushed somewhat out of the socket and she was blind, that she had probably during the retching and vomiting broken blood vessels in the orbit and in the eye. I saw the patient soon after and learned that she had been vomiting almost incessantly for two days, that she had great pain in the left side of the head, in the teeth and the eye. She was greatly prostrated. On examining her eye, I found that she could scarcely see the flame of a candle held within a few feet of her eye. The eye was very sensitive to light. The eyelids were somewhat swollen. The eyeball was slightly protruded from the orbit. The ocular conjunctiva was greatly ingested and swollen and a fold of it hung out of the palpebral fissure. The cornea was very cloudy and its epithelium was rough; touched with a piece of paper it seemed less sensitive than normal. The anterior chamber was very shallow, the iris swollen, and the pupil nearly double the size of that of the other non-affected eye. The opacity of the cornea prevented an examination of the fundus. A faint red reflex was all that could be seen. The eyeball was very hard, much harder than the other one. I made the diagnosis of acute inflammatory glaucoma, and advised an iridectomy as soon as possible. I instilled a few drops of the solution of the salicylate of eserin, which had, however, but little effect. The iridectomy was done under ether anesthesia a few hours later; the pain and the vomiting did not return after she came out of the ether, the wound healed rapidly, and three weeks after the operation the vision was restored to the former acuity.

I have related this case here, because cases of this group of acute glaucoma are most likely to fall in the hands of the family physician. The incessant vomiting, the violent pain in the head and the prostration are usually attributed by the patients to some stomach trouble, a bilious attack, or some disease of the head. The loss of vision, if noticed at all, and the redness and painfulness of the eye are frequently looked upon as a cold in the eye and not part of the general illness, and the family physician is sent for. I have seen a number of such cases, and I must admit that in some of these cases the physician took the same view of the eye trouble as the patient, and discovered his mistake only when the eye was totally blind and beyond help. In the majority of cases of acute glaucoma the onset is not as severe as in the case related. The pain is not as violent, vomiting may be entirely absent, and the headache may be much less severe. The outbreak is, moreover, in many cases preceded by attacks of cloudiness of vision lasting from a few minutes to several hours. The attacks come on at irregular intervals and are usually thought to be brought on by a sleepless night, an attack of indigestion, overuse of eyes in near work or some emotional disturbance. A restful night often restores the eye to its previous good condition, at least in the estimation of the patient, but a careful examination often shows some impairment of central vision, or slight contraction of visual field after the attack. Dur-

* Read before the Newark, N. J., Medical and Surgical Society, December, 1901.

ing the fogginess of vision in these attacks the patient, looking at the flame of a candle or a lamp, sometimes sees a colored ring around it. This ring is separated from the flame by a dark zone, its outer limit is red and its inner green-blue. It is regarded as an interference phenomenon caused by the cloudy media of the eye. The attacks here described constitute, according to some authors, a premonitory stage of the glaucoma, but I believe that it would be safer to regard them as the first stage of inflammatory glaucoma and to perform an iridectomy at once.

The diagnosis is, as a rule, not difficult in uncomplicated cases. The increased intra-ocular tension and the dilated immovable pupil are pathognomonic of this disease. To ascertain the tension the patient is directed to look downwards without closing the eye; the surgeon then places the tips of his two index fingers close together on the upper eyelid and makes slight alternate pressure on the globe some distance behind the cornea. If the eye is in a normal condition, the tension of this should be ascertained first and then that of the other compared with it. If the patient's other eye is not in a normal condition, comparison may be made with the tension of a normal eye of another person of about the same age as the patient. It requires, however, considerable experience to recognize moderate variations in tension even in eyes that are not inflamed, and the difficulty is much greater if there is swelling of the lids and edema of the ocular conjunctiva.

Dilatation and immobility of pupil is found in no other acute inflammatory eye disease, and even here it is not developed till other symptoms of inflammation have been present for some time. The pupil is not always round; very often it is of oval form, the long axis being vertical. It does not contract when exposed to the light, or the movement is at least very sluggish. If the eye has previously been affected by an iritis and some of the adhesions between the pupillary margin of the iris and the anterior capsule remain, the pupil may be of very irregular form. Unless the case has been under observation from its very beginning, careful inquiry should be made as to whether a solution of atropin, scopolamin or some other mydriatic has not been instilled in the eye, as those would also produce such dilatation. The cause of the dilatation of the pupil is, according to some writers, due to anemia of the iris caused by the compression of the base of the iris between the congested ciliary processes and the cornea. If the pressure is long continued, paralysis and atrophy of the sphincter muscle of the iris result from the compression of the nerves of the iris.

The insensibility of the cornea present in severe cases is due to compression of the nerves of the cornea by the increased intra-ocular tension. Shallowness of the anterior chamber is rarely a conspicuous symptom and requires oblique illumination for its detection. In some cases, however, the iris seems almost pressed against the cornea. The other symptoms, as the swelling and puffiness of the eyelids, the injection and edema of the scleral conjunctiva, the opacity of the cornea, are seen also in other acute inflammatory affections of the eye. In severe cases of irido-choroiditis the cornea has often the same cloudiness "like glass breathed upon," or has in it numerous short opaque lines running in various directions and often at right angles to each other. There is, however, this difference between this cloudiness of the cornea of glaucoma and that of other diseases, namely, in glaucoma the haziness will at times develop and again disappear in a short time, while in the other affections it always lasts a long time. I have more than once seen this opacity disappear in glaucoma cases in a few hours after the instillation of a few drops of eserin. The cloudiness is evidently the result of a rapid increase in the intra-ocular tension in these cases. Sometimes the corneal epithelium is found to be rough in acute glaucoma and some writers have seen small vesicles on the surface of the cornea in such cases. Acute inflammatory glaucoma is rarely seen in persons under 35 years of age, in most cases the patients are over 50 years old. Women seem to be slightly more frequently attacked by this disease than men.

The predisposing causes of acute glaucoma include gout, rheumatism, syphilis, congenital imperfection of the eye, senile changes and heredity. As exciting causes are regarded: depressing emotions, sleeplessness, deterioration of the general health, great fatigue, and instillation of a solution of atropin or other mydriatic.

Whilst increased intra-ocular pressure has been universally recognized as the essential of glaucoma since MacKenzie's time, there still prevails considerable diversity of opinion as to the causes of this increase of the intra-ocular tension. By some writers it is held that it is due simply to a hypersecretion of the vitreous fluid caused by an irritation of the nerves of the ciliary body, which latter is generally supposed to supply this fluid. Others hold that it is the result of an exudation of serous fluid, from the inflamed ciliary process and the choroid. The opponents of these theories claim that hypersecretion and exudation alone are incapable of producing the increase of tension, as experiments on normal living eyes show that an increase in the volume of fluid and therefore an increase in the tension of the eye produced by the injection of a small quantity of fluid in the eye, is speedily removed by the absorption of the fluid and a return to the normal tension. The theory which seems to find most acceptance at present is that the aqueous humor, which under normal conditions is supposed to escape by filtering through the angle of the anterior chamber, is prevented from doing so by the closure or blocking of this outlet. This is the retention theory. It is said that obstruction of the angle of the anterior chamber, also called filtration angle and spaces of Fontana, is commonly found in eyes blinded by glaucoma, and if not entirely closed it shows at least signs of compression. Priestly Smith holds that primary glaucoma usually depends on some vascular disturbance which congests the choroid, ciliary body and iris, or upon a faulty relation of the lens to the parts around it, or upon both. He holds that "in elderly people the lens is relatively large and that the relations of the lens in small eyes are such as to predispose to compression of the filtration angle, especially during dilatation of the pupil. An obstruction in the region of the hyaloid and the circumlental space, which checks the escape of surplus fluid from the vitreous and leads to an advance of the lens, appears to be present in many cases. Through one or other of these causes, or several in combination, the ciliary processes are pressed against the iris and the filtration angle is narrowed or closed. The escape of the fluid is retarded and the intra-ocular pressure rises. The increasing pressure hinders the flow of blood through the choroidal veins and augments the swelling of the ciliary processes, this in its turn increases the compression of the filtration angle. We then see that the condition perpetuates and intensifies itself in a vicious circle. A typical acute glaucoma is an inflammatory disease in the same sense that a strangulated hernia is so, but not otherwise; it exhibits an acute ob-

struction of the circulation which can be cut short by the removal of the pressure but in no other way."

Others are of the opinion that the swelling of the ciliary processes from venous stasis or from inflammation causes their points to press against the posterior surface of the iris. Thus the root of the iris is pushed forward so far that it lies against the anterior part of the sclerotic and the margin of the cornea and later becomes adherent to it.

Laqueur thinks that in glaucoma we may have both hypersecretion and retention. He looks upon the ciliary body as a kind of gland, the nerves of which, under strong irritation, starting centrally, cause hypersecretion. This causes an increase of tension in the vitreous body chamber and in the posterior chamber. As a sequence, the iris is immediately pushed forward, and as a consequence of the increase of the tension in the anterior chamber which now also takes place, the aqueous humor flows from the filtration angle till the tension is equal in both chambers. The anterior chamber is now shallower, and the periphery of the iris is pressed against the margin of the cornea. The filtration angle is now narrowed, perhaps obliterated, and the further escape of the aqueous humor is made more difficult or is entirely prevented. While the hypersecretion continues, the signs of increased pressure become more manifest and the well-known picture of acute glaucoma appears. The true cause of glaucoma, he thinks, is of an extra-ocular nature, but predisposing conditions must be present in the eye, and as such he regards racial peculiarities, rigidity of the sclerotic and the hypermetropic form. The inflammatory symptoms and the anatomical changes he regards as secondary. A decrease of the veinous outflow he does not regard as probable, as the veins of the eye contain but few muscular fibers and also because signs of stasis may be entirely absent in the mild premonitory attack. With regard to the nerves which regulate the secretion of the ciliary processes, he holds, we only know that they are not supplied by the fifth pair.

Stilling also believes that emotional disturbances increase the secretion of the intra-ocular fluid. In young people this is easily compensated, but in old people it meets with more or less difficulty because the compensatory channels for the outflow, the lymph spaces of the sclerotic and of the disc of the optic nerve, have been made impermeable through senile changes, namely, sclerosis. We must therefore look upon genuine glaucoma, he says, as a hypersecretion in senile eyes, that is, in eyes with contracted outlets. The augmentation of intra-ocular fluid is of itself a physiological process, only the eyes in which it takes place are no longer normal; in other words, they are no longer young. Something takes place here similar to senile hypertrophy of the prostate gland. If a youthful individual, from any cause, for instance much drinking, secretes an unusual quantity of urine, this hypersecretion does not cause the least disturbance because the excess can flow off without difficulty, but in an old man with contraction of the neck of the bladder, retention and its consequences follow. He denies that obliteration of the filtration angle is the cause of the increased intra-ocular tension, and regards it, if present, as the result of such increase. This view is held by many other writers.

Of the pathological anatomy of acute inflammatory glaucoma we know but little, as few eyes have been examined anatomically in the earlier stage of the disease. Closure of the filtration angle, due to adhesion of the iris to the periphery of the cornea, was found in most cases in which glaucoma had existed for some time. In more recent cases the angle was found not unfrequently open and in some of these cases there were absent also other causes of retention, such as sclerosis of the trabeculæ, emboli of pigment and obliteration of the sinus venosus scleræ. In the eye of a woman 54 years of age, removed on the eighth day after the beginning of an acute inflammatory glaucoma, Birnbacher found that the filtration angle was closed in several places; this was due to the union of the surface of the iris with the ligamentum pectinatum, which union did not, however, extend to the root of the iris. The anterior surface of the iris was inflamed. There was a diffuse serous choroiditis, as evidenced by an exudation, rich in albumin in all parts of the choroid. A pathological proliferation of the endothelium of the two upper vortex veins was found, an edematous swelling of the optic papilla and a slight depression of the lamina cribrosa. He and Czermack have found in chronic cases, well-marked signs of a past or present inflammation of the sclerotic and of the uvea, especially along the vortex veins and the scleral emissaries. These changes are designated chronic hyperplastic periphlebitis with consecutive endophlebitis, and their presence, they think, causes extensive disturbance of the circulation. This remains latent as long as there is compensation, but as soon as the compensation ceases to be complete, this becomes manifest as increased intra-ocular tension, and produces the picture of glaucoma. Others have found similar changes in the walls of the arteries and veins of the retina and optic nerve.

TREATMENT.

We have seen that mydriatics will sometimes bring on an attack of acute glaucoma, and will aggravate the disease if already present. It is therefore a good rule not to use atropin or other mydriatic for an inflammation of the eye, especially in elderly people, till you have assured yourself that the pupil is smaller than normally, and that the tension of the eye is not increased. As soon as you are convinced that acute glaucoma is present, eserin, either the sulphate or the salicylate, in one-quarter to one-half per cent. solution, should be instilled, and the instillation should be repeated at short intervals, till an iridectomy can be made. Eserin will occasionally increase the pain in the head by producing a superorbital neuralgia. If it does this, a 4 per cent. solution of pilocarpin must be substituted, although pilocarpin is by no means as efficient as eserin in contracting the pupil in acute cases. It is best not to prescribe either drug in a large quantity or to permit a renewal of the prescription, as I have seen a number of cases in which these drugs produced so much relief from the pain that the patient declined to have an iridectomy made, and did not consult me for subsequent attacks, but used the drugs in the belief that they were curing the disease, while in reality he was slowly becoming blind. Cocain in 3 or 4 per cent. solution may be used in connection with the myotics. It seems to relieve the pain and to do no harm. In addition to myotics and cocain, morphin should be given hypodermically in sufficient doses to produce sleep. In some cases the salicylate of sodium is also very useful in subduing this pain. Under medical treatment alone, as I have already said, an acute attack will sometimes pass over without leaving great impairment of vision, and in such cases the operation of iridectomy may be delayed for a while. But if no marked improvement is produced within a short time by these remedies, it will be necessary to make an iridectomy without delay, even

if great prostration from other causes would seem to prohibit it.

Iridectomy is the remedy par excellence in this disease; it has stood the test of time and the world owes a great debt of gratitude to the late Von Graefe for its discovery. While it is true that we may have good results from the operation if it is made within two weeks after the outbreak of the attack, there is no doubt that the result will be better the earlier it is made. Like other operations, iridectomy has its limitations; it can not restore the loss of sight and the contraction of the visual field that are due to anatomical changes in the optic nerve, produced by long continued or very rapidly increased intra-ocular pressure; all it can do is to remove the turbidity of the media and ischemia of the retina due to increased pressure. If both eyes are suffering from acute congestive glaucoma at the time the patient is first seen, the question arises: Shall we operate on both eyes at the same time or shall we operate on but one, and if only one, which, the better or the worse? Most operators of experience regard it as bad practice to operate on both eyes at the same time, as it is well known that the predisposition to chorioretinal hemorrhage and to malignant glaucoma, exists almost always in both eyes. The safest plan undoubtedly is to operate first on the worst eye and if all goes well to operate on the other some days later. I have been obliged to operate on both eyes at the same time and have had no reason to regret doing this. My practice has been in cases in which both eyes were affected, when first seen, to instill a 0.5 per cent. solution of eserin several times and if a marked contraction of the pupil follows in one eye, but not in the other, to operate first on the one least affected by the eserin and on the other several days later. If the eserin has no effect on either eye, I have administered a general anesthetic and operated on both eyes at the same time.

It is a well-known fact that soon after an iridectomy in acute inflammatory glaucoma the other eye which was apparently sound when the first was operated on, becomes attacked by the same disease. This occurred in several of my cases in former years. In most of these the symptoms subsided under eserin for a time. In the cases which did not yield to this drug, I operated at once. For several years I have instilled eserin in the sound eye before the operation and during this time the patient was in bed. and since then I have had no case in which the good eye was attacked while the patient was under treatment. Although months and even years may elapse before the second eye is attacked, it very seldom escapes entirely. With this fact in view, together with the fact that it is much easier to make a satisfactory iridectomy on a sound eye than on one that has glaucoma, some of the German surgeons do not hesitate to advise an iridectomy on the still healthy eye, before even the premonitory stage is present. Commenting on this fact, Czermack[1] says: "One can also advocate a prophylactic iridectomy on an eye that shows only signs of a disposition to glaucoma, that is, if it has a markedly shallow anterior chamber and the other is suffering or has already suffered from glaucoma." More recently De Schweinitz has pleaded for a prophylactic iridectomy under the same circumstances, in a paper which he read before the American Ophthalmological Society in 1901. Bearing in mind the accidents that have happened to me and others in eye operations, I should hesitate to urge upon my patients a prophylactic iridectomy unless they were obliged to go to some remote region where competent help could not be had.

1. Augenärztliche Operationen, Part 7, p. 762, 1898.

METHOD OF OPERATING.

To make a large and clean iridectomy in this disease, with much chemosis, a very shallow anterior chamber and a widely dilated pupil, is one of the most difficult tasks the ophthalmic surgeon is called upon to do. If great chemosis is present and the pupil can be contracted by eserin it will sometimes be to the best interest of the patient to delay the operation till the chemosis has somewhat subsided. A general anesthetic will be required in many of the acute and chronic inflammatory cases, though the subconjunctival injection of cocain and eucain are said to produce sufficient insensibility to permit of an accurate operation. Instillation of cocain or holocain, even if combined with solution of the extract of suprarenal glands, rarely reduces the sensibility sufficiently in these cases.

Unless the iris is more disorganized here than elsewhere the iridectomy should be made upward, so that the coloboma lies under the upper lid. I nearly always use a narrow cataract knife for the incision, enter the sclera about one mm. from the clear corneal margin and make the counter-puncture at a corresponding point. The section should have a length of 8 mm. In cutting out, the edge of the knife is turned slightly forward, but should come out in the sclera and make the conjunctival flap as narrow as possible. In cases of very narrow shallow anterior chamber it is not always practical to make an incision of this length and one must be satisfied with a smaller one. The iris is seized at about the middle of its width, drawn straight out and cut close to the lips of the wound by two or three successive strokes of the scissors, first close to one end of the incision, then at the middle, and last at the other end. If the sphincter corners do not return to their natural position, a blunt probe should be carefully introduced into the anterior chamber to disengage the incarcerated iris from the angles of the wound. Rubbing the adjacent cornea will only rarely accomplish this. Some surgeons prefer to make the incision with a broad lance-shaped knife and to tear the iris from its root. I have tried both but have given them up.

Of the accidents during the performance of iridectomy, wounding of the iris and lens capsules are most frequent. If the point of the knife becomes engaged in the tissue of the iris slight lateral and forward movements will usually disengage it. If not successful in this, the knife must be withdrawn and the wound be enlarged with a fine pair of curved scissors. The anterior capsule may be wounded by the point of the knife, by pressure of the back of the knife through the iris intervening, by the iris forceps during manipulation to reduce the incarcerated iris in the angles of the wound, by the sudden advance of the lens through the sudden reduction of pressure. The development of cataract in a glaucomatous eye is fraught with the gravest consequences and extraction of the lens is usually necessary. Hemorrhage in the anterior chamber is of frequent occurrence after iridectomy and does not interfere with the healing process. Prolapse of vitreous is not often seen during the operation and its occurrence does not seem to do much harm.

The after-treatment pursued by me in the last few years has been very simple. I keep the patient in bed till the wound is closed. I place an aluminum shield over the eye; cleanse the eye daily with sterilized water

and instill a drop of the atropin solution after each dressing. I leave the other eye open and instill one drop of a one-quarter per cent. eserin solution in it once daily. This plan of treatment is much more comfortable to the patient than the bandaging of both eyes and the healing of the wound seems to progress as speedily as under the bandage.

CASE OF CESAREAN SECTION UNDER SPINAL ANESTHESIA.

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A report of the following successful case is not presented because of anything particularly peculiar in the operation itself, but mainly in an attempt to show what appears to the author the superiority of spinal anesthesia over ether or chloroform in cases of Cesarean section, because of the relaxed condition of the uterine muscles likely to obtain with the patient anesthetized by either of the two latter methods.

The patient, a primipara, 28 years old, of small stature, suffered in early childhood an attack of poliomyelitis anterior acuta, as a result of which the right side of the body failed to keep pace in a matter of growth and development with the left. The right arm is 4½ inches shorter than the left, and the right half of the pelvis is correspondingly small, which fact, together with the markedly kyphotic condition of the lumbo-sacral spine, was largely responsible for the necessity of Cesarean operation. The diagonal conjugate measures 9 cm. The external conjugate (Baudelocque's diameter) measures 16 cm.

She had been pregnant twice before, but aborted each time at about the second month. During the present pregnancy the child had never entered the true pelvis, but rode above the brim. Deeming Cesarean operation the only way possible to bring the child living into the world, the patient, on Dec. 21, 1901, was removed to the hospital two days before full term in order to have her prepared for the operation, which preparation was done as for an ordinary celiotomy, the vagina also being rendered as nearly aseptic as possible. After labor had been in progress sufficiently long to insure good uterine contractions and dilatation of the os, there was injected into the spinal canal one-third grain of cocain hydrochlorate; the spinal fluid was used as a solving medium according to the method of Guinard of Paris, who has reported 70 cases anesthetized in this way, with none of the usual distressing post-anesthetic phenomena.

After the injection the patient was immediately transferred to the operating table, the abdomen and vagina again subjected to mechanical and chemical disinfection, by which time the entire body below the neck was anesthetic. A median incision, extending from 2¼ inches above the os pubis to 2½ inches above the umbilicus, was made through the abdominal wall and the pregnant uterus eventrated through the incision, the upper part of which was closed by Volsella forceps under the fundus, thus preventing exposure of the intestines. The uterus was at once covered by two large pads wrung out of saline solution, and in the median line between these pads an incision was made through the uterine wall, exposing the placenta attached in front. With the index finger of both hands, the placenta was torn through, the child extracted, and after its respiration was established the cord clamped and cut and placenta and membranes peeled out with the hand. During the incision of the uterus and extraction of child and membranes, the pads were several times changed for fresh hot ones and the interior of the uterus was, after being emptied, douched with hot water.

Uterine contraction was prompt, vigorous and perfect, and hemorrhage less than usual when the child is born *per vias naturales*.

Interrupted sutures of heavy chromicized catgut were used to close the uterine incision, and a continuous Lembert stitch of silk to close the uterine peritoneum. By previous request of patient the tubes were doubly ligated with heavy silk in order to render her sterile. The abdominal incision was closed in the usual manner, using silk for the peritoneum, and silkworm gut for the musculature. A dry dressing was placed over all, a vaginal examination made to insure good uterine drainage, a pint of saline solution used subcutaneously below the clavicles and the patient returned to bed. The child, a female weighing 4½ pounds, was allowed to nurse at the end of 24 hours.

The usual annoying post-anesthetic phenomena of headache and vomiting were absent in this case, probably attributable to the use of spinal fluid as a solving medium for the cocain, thus avoiding the introduction into the spinal canal of a foreign substance (water), and also possibly because the intraspinal pressure was not increased by the injection of fluids, other than normally belonged there. In one other of my cases of spinal anesthesia wherein the cerebrospinal fluid was used to dissolve the cocain no headache nor vomiting followed the procedure.

In the case above referred to the operation required forty minutes for its completion, and anesthesia was profound during that period though tactile sense was not lost. Save for a phlebitis which developed in the left leg at the third week to disappear in five days under elevation and cold application, the mother made an uninterrupted recovery and left the hospital with her child at the end of five weeks.

The only recorded case of Cesarean section done under spinal anesthesia that I was able to find was performed by Doleris of Paris, who speaks in glowing terms of its usefulness in these cases because of the prompt and vigorous uterine contraction.

Where Cesarean section is done for placenta previa the grave danger of the failure of the uterus to contract because of the woman having suffered the loss of much blood previously is well known to all the obstetricians.

In the case of Dr. W. J. Gillette of Toledo, Ohio, wherein a Cesarean section was performed for placenta previa, after ten minutes of manipulation the uterus refused to contract, and required extirpation. It is not impossible that spinal anesthesia would have obviated this.

The well-known and powerful oxytocic properties of cocain hydrochlorate, particularly when given intraspinally, must surely recommend its use in cases wherein a failure of uterine contraction is at all possible.

Not much has been written upon the subject of intraspinal anesthesia in obstetrics. The first, and perhaps the most extensive is a monograph by Malartic, entitled, "Les injections rachidiennes de cocaine in obstetrique," Paris, 1901.

Apparently a large field is open in this direction, and cocain, subdurally for cases of uterine inertia with maternal exhaustion and in the previously mentioned class of cases, surely merits a fair trial.

A CASE OF BLASTOMYCETIC DERMATITIS (?)

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A Polish woman, 32 years of age, came under my care in May, 1901, suffering from a disease involving the face and causing blindness of the right eye, destruction of the nose and marked eversion of the lips. Her family history was negative. She was born in Poland and came to New York when she was 10 years old and was never sick, excepting the present illness. Venereal diseases were denied.

The history of the present complaint is as follows: About one year ago the patient noticed a pinhead-sized, firm, slightly tender swelling near the right angle of the lower jaw. The swelling was located in the skin and was freely movable. In a few days it developed into an abscess which ruptured, leaving a small ulcer. From this beginning the process extended, usually by induration and swelling followed by pus formation, crustation and, in some places, by resolution and cicatrization. In a few months the regions of the neck, mouth and nose were involved. Later the right side of the face, right eye and right ear became affected. The process still progressed, and when I first saw her the disease had advanced to the extent shown in the photograph—involving the neck, face, ears, forehead and, in places, the scalp.

The symptoms complained of were local pain, tenderness and itching; difficulty in eating and speaking, due to involvement of the lips; uncontrollable escape of salivary secretion from the mouth; epiphoria, and, during the last three weeks, progressive dimness of vision of the right eye. No other symptoms were complained of. Her general health seemed good. She felt strong, was able to work and had lost no weight. Examination of the heart, lungs, abdomen, extremities, nervous system and genitals revealed nothing abnormal. The lymphatic system was normal except that there was enlargement of the submaxillary and cervical glands. The urine was normal. Examination of the blood showed: Red corpuscles, 4,500,000; white corpuscles, 14,800; hemoglobin, 80 per cent. (sp. gt. method). Nothing abnormal in shape or size of the red cells was observed. The increase in the white cells seemed to be of the polymorphonuclear variety. The eosinophiles comprised less than 2 per cent. of the white corpuscles.

The borders of the disease are everywhere well defined. In some places apparently perfectly normal skin is in contact with a smooth, thin and atrophic integument—doubtless healed areas which had been the seats of superficial involvement of the disease. In other places—where deep scar formation has occurred—the skin is, more or less, wrinkled and the line between the diseased and healthy tissues is less definitely made out. The borders of the disease, corresponding to the areas, the seat of progressive involvement, are not so clearly defined as are the borders of the healed areas, the skin being thickened, reddened and indurated. In some places the diseased areas are markedly elevated. On the right side of the neck a smooth, atrophic area is elevated about 5 mm. above the apparently healthy skin, which is continuous with it. In the median line of the neck is an area with an elevated border, covered with papillary processes which, in places, overlap the normal integument.

Examination of areas, the seat of progressive involvement of the disease, shows papillomatous growths, abscesses, crusts and ulcerated areas. Microscopically, the papillomatous growths seem to be processes of the corium covered with epithelium. Many cocci and pus corpuscles are found in the abscess cavities. The corium is vascular, infiltrated with leucocytes and round cells, and small abscesses are found containing globular and budding bodies supposed to be yeast fungi. Very few giant cells are observed. No yeast fungi were found in preparations made from the larger abscesses found on the surfaces of the diseased areas. Many small ulcers, from two millimeters to a centimeter in diameter, are found on the right side of the face and neck. These ulcers are circular, with clean-cut borders. The floors of the ulcers are smooth and no undermining of the edges is present. It seemed probable to me that these ulcers were the result of abscess formation due to infection with the ordinary pus cocci.

The lips are so markedly everted that the patient is unable to approximate them. The eversion appears to be caused by the contraction of scars resulting from the disease. The labial mucous membrane shows no evidence of a disease similar to that affecting the face.

Blastomycetic Dermatitis.

The upper and lower lids of the left eye are the seats of the disease in an active state. The conjunctiva and eyeball are not affected. The lids of the right eye present scar formation with contraction and marked eversion of the lids. The conjunctiva is involved in places, especially the upper lid and the outer part of the lower. A cicatrix is found on the inner half of the lower lid. The bulbar conjunctiva is so affected as to render the cornea opaque. No vision is present in the right eye.

The ears are affected with apparently the same process that involves the face. The scalp is involved in the right temporal and left mastoid regions. The process on the scalp seems to correspond to that on the face except that the large abscesses are more numerous and the crust formation is more abundant.

The treatment of this case was unsatisfactory. I was called out of town ten days after the patient was admitted to the hospital, and on my return found that she had left the institution, and I could not afterwards find her. During the time that the case was under my care the treatment consisted of the administration of 20 grains of potassium iodid, internally, four times a day.

Locally, I treated five separate areas differently. One area I curetted and made no applications; another I curetted and then applied a 4 per cent. ointment of potassium iodid in vaselin; a third area was curetted and a mixture of equal parts of tincture of iodin and guaiacol applied; to the fourth area I applied pure carbolic acid, and to the fifth a mixture containing equal parts of iodin and carbolic acid. The fourth and fifth areas were not curetted.

The disease showed improvement in all of the areas treated. The area treated by curetting and applying iodin and guaiacol did better than any of the others. The least improvement was observed in the areas treated by pure carbolic acid, and by curetting followed by the potassium iodid ointment.

ACUTE ANTERIOR POLIOMYELITIS IN A YOUTH OF 18 YEARS. REMARKS ON THE SENSORY SYMPTOMS.

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A. M., aged 18 years 2 months, was taken with a febrile attack Oct. 13, 1900, accompanied by much pain in the back and thighs, and followed by acute paralysis of the lower limbs.

The patient, an intelligent young man, gives the following account of the attack: On the day he first took to bed he went to school as usual in the morning, although feeling poorly. He was too ill to remain at school, but walked home, a distance of one mile, and went to bed very ill. The next two days he was very restless, suffering especially with pain in the loins and thighs; he was so sensitive to touch that he dreaded to have anyone take hold of him, and it made him sore and tired to lie, and he was in and out of bed frequently. Finally, he could not get up and realized that his lower limbs were paralyzed. Thus, he went to bed Friday after returning from school, and on Sunday he was paralyzed.

He is confident that this painful stage lasted eight to ten days. He instances various collateral data which show that his statements are accurate. After the severe pain there still remained about a week during which moving and touching the paralyzed members, especially the left, caused considerable pain.

During the fourth week after going to bed he discovered that slight voluntary movements were present in the right leg, but none in the left. He did not sit up until the sixth week and then his back was so weak that he could not remain up long.

During the fever stage it was necessary to use a catheter for a day or so, and the bowels were constipated.

Dr. C. A. Anthony, Fredericktown, Mo., the attending physician, observed the case with much interest, remembering the details very accurately for the reason that they were very confusing to him for some days. His account of the onset and the great amount of hyperesthesia and pain in the back and paralyzed members conformed exactly to the statements previously obtained from the patient. No sensory tests were made at the time.

I first examined the patient Jan. 25, 1901, more than three months after the attack. I found a paraplegia of the lower extremities, very little movement in either of them, the right some better and improving faster than the left; but even the right leg had to be lifted in or out of bed or over the left. He could only get to a chair from the bed and back again with effectual assistance from a strong person.

Dr. M. W. Hoge kindly assisted me in making routine sensory and electric tests. We found all the muscular groups of both extremities more or less atrophied. The most intense atrophy was in the left thigh; apparently, the best preserved group was the calf of the right leg. The flexors of the left knee and foot were becoming contractured, and there was also a slight contracturing tendency apparent in the toes of the right foot. Electrical tests showed a reaction of degeneration, or a partial reaction of degeneration, in all the atrophied groups, the right calf and some of the right thigh muscles alone giving normal reaction. The skin of the feet and legs was cold, clammy, livid; improving in appearance from below upward and better on the right side than on the left. Careful sensory tests (touch, pressure, pain, temperature, etc.), showed slight obtundity, but not more than would be accounted for by the bad trophic state of the skin. There were no dissociate sensory symptoms, except possible pain and temperature sense were a trifle more dulled in the feet than tactile. The general sensation was improved from below upward, its impairment corresponding exactly with the nutritive impairment of the skin. There was no muscle tenderness or hyperesthesia anywhere.

This patient presents another interesting pathologic condition, which probably has no etiological relation to the myelitis, but which we may record as follows: March 31, 1899, he was accidentally shot through the chest, the ball entering to the left of the sternum about the third rib and coming out behind the right clavicle. There is an aneurysm of the arch of the aorta as a result of this injury which causes him no annoyance. He made a rapid recovery after the accident and seemed perfectly well and strong until the time of the paralytic attack which was eighteen months later.

At this writing, eight months after the attack, the patient is hobbling about on crutches, the right leg having improved considerably but the left very slightly.

On account of this patient's age there was an unusual opportunity to obtain an account of the subjective sensory symptoms in a severe attack of acute anterior poliomyelitis. I believe, as do others, that the importance of the sensory symptoms has been somewhat overlooked, and more especially in some of the text-book discussions of the disease. Without attempting an extended consideration of the question I simply wish at the present time to embrace this opportunity of calling attention to it.

Dana[1] thus defines the disease: "Anterior poliomyelitis is a disease of the spinal cord characterized by motor paralysis of rapid onset, followed by muscular wasting, without sensory symptoms. It occurs at all ages but vastly oftener in infancy; hence it is often called infantile palsy."

And Starr[2] thus: "Anterior poliomyelitis is an acute disease observed most commonly among children, but occasionally in adults, characterized by sudden complete loss of power in one or more limbs, followed by wasting of the muscles paralyzed, and by interference of the growth of the parts, but not attended with any sensory disturbances."

Below are quotations from a number of writers whose texts I have picked from my shelves at random:

Hirt:[3] Vague pains in the limbs.

Struempell:[4] The child complains of headache and sometimes of pain in the loins and limbs.

Rosenthal:[5] Sensibility is sometimes exaggerated at the outset but at a later period it becomes normal.

Bruns and Windscheid:[6] Sensation is always preserved, as far as this can be determined in little children. The bladder may be affected in the initial stage, although, of course, this is a difficult matter to determine in very young children.

Oppenheim:[7] There is no pain generally; rarely it may be so acute as to simulate acute rheumatism. The muscles may be sensitive to pressure. If the pain of the muscles and nerves is considerable some neuritis is probably present.

M. Allen Starr:[8] It is generally observed that children cry a good deal during the period of onset, and some of those who are able to complain say that they suffer from pain in the back and in the affected limbs. This pain may remain for some weeks. . . . Retention of urine has been noticed for a few days. . . . There is no complaint of numbness or of paresthesia and there is never any loss of sensation; but the limbs are sometimes painful upon any movement, especially in the joints.

Dana:[9] After the general disturbance subsides there may be some pain in the back and limbs for a few days, and in rare cases the bladder is involved so that there is retention of urine.

Gray:[10] Other reflex phenomena as variable as the fever itself may accompany it, such as delirium, somnolence, convulsions, with or without loss of consciousness, muscular twitchings, vomiting, headache, temporary retention of urine, pain in the loins and in the limbs that are subsequently paralyzed, or general pains. Children of four or five years may be able to locate the pain, while younger ones will only evidence it by crying when they are touched or lifted.

Collins:[11] Usually accompanied in children by manifestations of irritation of the central sensory sphere, such as vomiting, convulsion, flightiness, irritability, and a serious disinclination to be handled, as if pain were caused thereby.

After the general phenomena of inflammation subside, there are no sensory disturbances, subjective or objective, although enduring pains in the extremities have occasionally been noted. When such symptoms occur they indicate an involvement by the inflammatory process of the posterior cornua and the root fibers passing therein.

Ross:[12] Sensory disorders are almost entirely absent during the whole course of the disease. At the outset patients may complain of pains and various paresthesiæ, but these symptoms are of short duration. A certain degree of cutaneous hyperesthesia, or rather hyperalgesia, has been described as being present during the febrile stage, but this tenderness to touch probably depends on tenderness of deeper structures, such as rheumatic inflammation of joints. The cutaneous sensibility is sometimes blunted in the paralyzed extremities in old standing cases, but this probably depends on underlying nutritive and vascular changes.

Church and Peterson:[13] Most writers state that there is a complaint of pain in the afflicted members only rarely, but that, as a rule, sensation in all its phases is entirely normal. It is probable, however, that early dysesthesia, owing to the usual infantile age of the patient and a lack of careful search for such difficulty, has been frequently overlooked. In some considerable number of the cases handling of the affected limbs during the initial fever provoked outcries which were not elicited by similar manipulations of the other members. It is likely that more attention in this direction will show localized hypersensitiveness, or some kindred state, to be usually present and of diagnostic importance. Indeed, complaints of pain and of fornication have been generally noted in older children and in adults, lending, perhaps, undue weight to the usual supposition that such cases are not of a true spinal type. . . .

The adult form is in no way different from the infantile cases excepting the variations due to complete growth having been attained. In anomalous cases the onset of the disease is insidious and the course may be subacute. After infectious diseases one or more limbs may be found useless, flaccid and atrophic, declaring the antecedent myelitis. Occasionally the onset is marked by pains of a severe cutting character, which are frequently attributed to neuritis or to rheumatism, but may be due to irritation of the sensory pathway in the cord by the location of the myelitic focus backward, involving the neck of the posterior horn.

Peterson:[14] Pain referred to the limbs or back and sometimes even muscular tenderness is apt to be present. The differential diagnosis between peripheral neuritis and poliomyelitis is often difficult in adults, and sometimes indeed, impossible, owing to the occasional prominence of sensory symptoms.

Of the texts above cited some maintain one feature of the sensory phenomena and some another until with them all before us the relative importance of these disturbances may be made out. Only one work gives the subject adequate consideration, namely, Church and Peterson's. My individual experience leads me to recognize the force of the statements therein contained.

In a communication[15] written in 1888, I dwelt briefly upon the sensory symptoms of an interesting case therein reported. Before, and more especially since then, I have been interested in remarking the sensory phenomena of cases of poliomyelitis coming under my own observation, and in those reported by others. I think there is no question that hyperesthesia and pain are both usually present and that they are also usually proportionate to the intensity of the invasion.

In the communication just alluded to I explained the sensory symptoms, as had others, by assuming that there was produced an irritation of the posterior areas of the cord by the overflow of the inflammatory process, whose point of most intense activity was, for some reason which we could then not explain, always in the anterior horns. Collins, Church and Peterson, as herein cited, and others, seem to find this explanation satisfactory. On the other hand some lean to the opinion expressed above by Oppenheim, that pronounced or important sensory symptoms mean a concomitant neuritis. This latter is probably often a hasty supposition, as Church and Peterson intimate. The sensory symptoms of these myelitic attacks are too ephemeral and intense in their duration for even a mild neuritis. They sometimes reach their full intensity within a few hours and are gone within a few days, leaving all forms of sensation quite normal; and secondly, their distribution is not the usual one of neuritis. They infest the back and the proximal portion of the extremities and are not heralded by paresthesias in the hands and feet.

From the above it is evident that these phenomena are the source of some confusion. This is due to the fact that as yet they have probably not been sufficiently studied. The complete absence in typical anterior poliomyelitis of final or permanent sensory disturbances has led us to overlook the significance of those which occur in the onset. For example, in each of the definitions cited above it is affirmed that there are no sensory symptoms attending the disease. This arises probably in the eagerness of these writers to define anterior poliomyelitis as a distinct clinical and pathologic entity, instead of merging it too much in the descriptions of other forms of myelitis, as some clinicians have done. Failing to mention these symptoms at all in a definition under the circumstances would be better than to affirm their absence.

The diagnostic importance of this study is thus suggested by Church and Peterson: "The differential diagnosis between peripheral neuritis and poliomyelitis is often difficult in adults and sometimes indeed, impossible, owing to the occasional prominence of sensory symptoms." With a little pruning this sentence conveys the gist of the discussion. I would say that the sensory symptoms are more than occasionally prominent, and that, while the greatest difficulties of diagnosis need

not arise very often, they do occur frequently enough and are important enough to demand increasing attention. In considering these difficulties we must keep in mind the following possibilities:

1. Cases of acute anterior poliomyelitis with no noticeable sensory symptoms. These are rare, at least in adults and in children old enough to express themselves.

2. Cases of acute anterior poliomyelitis with severe pain and hyperesthesia in the paralytic members in the onset and lasting for a variable time. These cases are also rare.

3. Cases of acute anterior poliomyelitis in which the sensory disturbances fall between the extremes of numbers 1 and 2. These are the usual cases.

4. Cases of multiple neuritis with unusual sensory symptoms and distribution.

5. Cases of so-called "multiple neuritis of the motor type," with little or no sensory symptoms.

6. Cases in which multiple neuritis and poliomyelitis are associated. Such cases have been pathologically demonstrated. They are difficult to diagnosticate; and certainly are not frequent. They are caused by some widespread and intense toxic process, producing grave general symptoms.

7. Miscellaneous conditions, as acute ascending paralyses, "family periodic paralysis," myesthenia, hysteria, etc., which, in the differentiation under consideration, will hardly create confusion when carefully studied.

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SOME CLINICAL ASPECTS OF CHEMISTRY.

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Even the most superficial observer of the expansion of the medicine of to-day might accept without much question the claim of chemistry to be the first of the pure sciences which form the foundation of medicine, for the potent influence of its leaven may be perceived throughout the whole medical mass. Clinical laboratories are growing in favor and influence; publishers have produced a superabundance of text-books which purport to "make clinical chemistry easy"; medical journals accept at sight articles on almost any chemical subject, some of scientific value, some of practical value, some of no value.

At a recent large medical congress so much time was spent on the chemical side of internal medicine that one not interested in that subject must have had to exert unusual efforts to look interested and knowing. What did he care what the intermediate products of sugar metabolism are, or whether the body can recognize the difference between a "right-handed" and a "left-handed" pentose with the same empiric formula? Of what "practical value" is it to discover an extra ferment in the stomach? Does the "practical man" care to know how a hen synthesizes uric acid?

Neurologists now examine urine with greater interest and demand that we find there the cause of a neuritis. Oculists and dermatologists awake to the fact that the whole body is one and that the chemistry of this whole may throw light on the organ in which they are interested. Students are required to take chemical courses before beginning to study medicine and it is a professor of anatomy who suggests the addition of another year of pure chemistry to the already long list of requirements of one school.

But chemical education does not emanate alone from medical schools, medical journals and medical congresses; every practitioner gets a free course through the mails. He is bombarded with pamphlets giving a detailed account of some recent "Arbeit" in chemistry, and advertising a new food or new preparation of some well-known substance, or some brand-new drug which is the tangible and expensive embodiment of the above-mentioned "Arbeit." The whole practical medical world, in fact, is studying chemistry.

But it is not alone medical men who are turning chemists for the pathologists are also studying chemistry—their hemolysins, bacteriohemaglutinins, antihemaglutinins, toxophores, heptophores, complement-ophilic groups and intermediary bodies are now or soon will be playthings of "pathologic chemists."

The physiologic laboratories have also felt the leaven. The kymograph is run down, the plethysmograph leaks, the nonpolarizable electrodes almost spark, burettes, test tubes and beakers cover the tables, for the physiologists are, many of them, studying chemistry. Here the recently-called professor of physiology is a pure chemist; there almost the whole physiologic staff is working on chemical problems. The journals which publish the mechanical side are termed by a pure physiologist "uninteresting," journals of physiologic chemistry grow in number and circulation and the physiologic chemical laboratories are admitted by eminent clinical men to be the centers from which the medicine of to-day is progressing.

The growth of the physiologic chemical laboratory is of the utmost importance to clinical medicine, for now the clinical laboratory will be provided with methods which are of practical use to the clinical man, and with men well enough trained to use them. Clinical chemistry is no new subject. Urinary examination has long been recognized as of the greatest importance, but the work has not been done by men especially fitted and the methods in use were many of them poor. Nevertheless, and in fact because of this, there has grown a very extensive literature of clinical chemistry and to increase this has been one of the earmarks of a "very scientific practitioner." The advent of physiologic chemistry, the occupation of the field by thoroughly-trained men, has sifted and weeded this literature to a surprising degree. Instead of a long list of diseases in which the xanthin bodies are increased or diminished we now read that the method used was so inaccurate that "our knowledge of the relations of xanthins to pathologic processes is as defective as it was years ago"; the alkalinity of the blood is not arraigned as often as a few years ago, although we still suspect it is an offender, but can not prove it; phosphaturia is now a name only. Compare a text-book of clinical chemistry of this year with one

* Read before the Clinical Section of the Medical and Chirurgical Faculty of the State of Maryland.

of a few years ago and see how much less we know now than then.

The advances already made by study of the chemical side of internal medicine are great. Metabolism experiments in various diseases have thrown considerable light on the nature of these conditions and in the sphere of dietetics aided the practitioner to no small degree. They were clinical chemists who showed the importance of the test meal, the meaning of the hyperacidity and anacidity, of free and bound hydrochloric acid, the significance of lactic acid and lastly the importance of the increased bound chlorids in the early diagnosis of cancer of the stomach (Reissner). It was a clinical chemist who showed that in the pneumonic lung the exudate was digested as if it were a piece of meat in the intestine, and that from examination of the urine the amount of lung resolved could be each day weighed. The practical results from this may be considerable. They were clinical chemists who taught the profession so much about diabetes mellitus; a short review of this subject will be a good illustration of the contributions of clinical chemistry. The presence of sugar in the diabetic's urine had been long known and its amount followed by clinical chemists, but does this explain diabetic coma, the dyspneic coma of Kussmaul? Petters ascribed this to acetone, Gerhardt to a body later found to be diacetic acid, but neither of these is the poison, yet the qualitative tests of these are of great value and can be easily and repeatedly made by every practitioner in every case of diabetes. Following a suggestion from a pharmacologic laboratory Hallervorden demonstrated the increase of ammonia in the urine of diabetics—and in each severe case this quantitative determination should be made at stated intervals—this increased ammonia proved that in the urine was an increase of acid. Stadelmann proved this acid to be organic, showed the relation between its increase and coma, pointed out the similarity between diabetic coma and that of rabbits with acid intoxication (Walters), and deserves the greatest credit for introducing the alkali treatment of diabetes. It remained for clinical chemists, Minkowski and Külz, to isolate this acid, which they found to be oxybutyric acid, from the decomposition of which acetone and diacetic acid arise. The discovery of this body must have surprised chemists. They had interested themselves in many bodies present to about one-half a gram or less, and overlooked this often present to the amount of 20-30 gms. and in coma even one-quarter of a pound a day!

Before the alkali treatment, when rigid diet of diabetics was enforced, the practitioners noticed that many patients promptly went into coma and died—why? Again clinical chemists answer. That acetone and diacetic acid are present in a normal fasting person, or a patient with almost any disease causing severe malnutrition, clinical chemists had noticed. Gerhardt and Schlesinger then showed that a normal person who eats the diabetic's rigid diet will, on about the seventh day, show even nine grams of oxybutyric acid in his urine. Since this acid is then a product of metabolism of any person when the diet is too poor in carbohydrates, what wonder then that the diabetic, already on sugar-rich diet half poisoned by it, should, when sugar is withheld, at once succumb to the increase of this acid? How necessary it is that the practitioner should know whether or not his patient is already in a condition of partial acid intoxication, by the simple tests for acetone and diacetic acid, and, if this is the case, should give an abundance of sodium-bicarbonate, not "fifteen grains with each meal," but even that number of grams and govern the size of the dose by the amount of the ammonia, for it is the absence of alkali which forces the body to increase the ammonia in the urine, and the accurate amount of this any practicing physician can determine, if he will. But physiologic chemistry (Hofmeister) has called the attention of clinical chemists to the importance of determining the assimilation limit of the patient and the diagnosis of diabetes mellitus is now made when the urine is sugar-free. Lastly, glycuronic acid is now well proven a first product of sugar metabolism and to find this increased, even though sugar be not present, may soon be ground for rejection by insurance companies as diabetic.

The above are a few of the contributions of chemistry, but it has only begun its serious work and promises much greater results.

We hope that one of these will be to convince the medical world that eggs and milk are not only a good, but the best diet for a patient. At present the tendency is to prescribe predigested proteids, various peptone preparations and many other specially prepared foods, so that in a long fever the bill for these may well appall the wage-earner of the family. Nevertheless, it is questionable whether there is any good evidence in favor of such foods, which justifies such expense. Certain it is that their superiority over simple eggs and milk has scarcely any, if any, physiologic basis. It is not proven that albumoses have even the same nutritional value as the native albumins of milk and eggs, or that these latter if properly given are at all hard to digest. As for "peptone" each new work seems determined to destroy our faith in it as an important product of digestion (Zuntz and especially Cohnheim). Meat extracts may have a stimulating effect and do, hence the certain benefit which the patient derives; but as for their nutritional value, one may as well feed a fire from the ash heap. On the whole, we can assert that the weight of physiologic evidence is against artificial foods, including in that list all predigested foods. Predigested they may be for a test tube but not necessarily for a patient—the normal body and more so the diseased, demand albumins. These it digests to suit itself, breaks them down to amidoacids and then synthesizes these to the proper albumin and at the present state of our knowledge it is much better to furnish even the diseased body with the raw material than to try to aid it by furnishing products of artificial digestion which, so far as we know, it can not use. Clinical evidence that such foods are unnecessary may be obtained from Dr. Osler's wards where they are never given. Seldom it is that a patient can not digest properly diluted milk, still less seldom that he can not well-prepared egg albumin or beef juice. Of course, the tendency now, when few medicines are prescribed, is to prescribe foods, but the practitioner may well bear in mind that their nutritional advantage is questionable, the chief person to benefit being the manufacturing chemist, and that eggs and milk, if properly prepared, may be even superior and do not cost one dollar a bottle.

One of the most promising fields for clinical chemistry is anemia and it is of interest that hematologists are turning from the morphologic to the chemical side. We read less now of blood counts in pernicious anemia, more about specific gravity, potassium and sodium percentages of the plasma, fat determinations, etc. This is only natural as the plasma is by far the most important part of the blood; red corpuscles, and leucocytes also per-

haps, have a very limited function compared with that of the plasma. When in a case of anemia we count the reds, determine hemoglobin and estimate the percentage of eosinophiles and lymphocytes and polymorphonuclear neutrophiles we gain excellent clinical information, but so far as approaching the question of the anemia we have only begun—the cause of such changes as we find lies farther back, in the plasma or blood-forming organs, and in the latter case the plasma may still be to blame. Ask a student what the hemapoietic organs are and he will doubtless answer, bone marrow, lymph glands and spleen, thus omitting three just as important, I think more so, intestinal wall, liver and kidneys, for these determine the composition of the plasma. No, chronic anemia is not oxygen starvation. Clinically, we must depend almost entirely on a study of the morphologic elements, but the laboratory worker must and is already going much further and over two-thirds of the recent communications on blood have dealt with its chemical side.

We read much and hear more lately of the practical value of blood examination. Some would give it first importance evidently as much as the physical examination of the patients; some, because they can not rely on it alone, deny it any importance, while others insist it is of value when well done and rationally interpreted. It is certain that blood examination to many means merely leucocyte counting. Our experience may be briefly stated: In practical internal medicine, leucocyte counting is invaluable. In surgery it is very important, usually throwing some light on the case; sometimes it alone determines the course of action, on other cases its evidence is disregarded. In all cases it must be interpreted by one who understands that leucocytosis is a biologic chemical reaction, hence must not be asked to conform to mathematical standards as a purely chemical reaction might be. He also should be one who has made just a few leucocyte counts himself and knows whether or not a slightly higher count means a rise of leucocytes. Counting red corpuscles is in internal medicine very valuable. Hemoglobin determination is for both physician and surgeon indispensable. Differential leucocyte counting is for the physician always of interest, often of considerable value, but will never have the importance claimed for it until the chemist has shown us the "why" of our staining reactions, and the physiologist the origin of the cells. Further blood examination, alkalescence, the composition of the plasma may in the future be a matter of routine, but at present they belong to the clinical chemist.

But one point deserves further mention and that is the staining reactions of the blood cells. Following Ehrlich's work we have in the past few years learned another language, the nomenclature of blood staining. We are asked to recognize amblychromatic and trachychromatic nuclei, to distinguish carefully between eosinophilic and fuchsinophilic reds and not to mistake the latter for polychromatophilic degeneration. This little thread of chromatin is the trademark of bone-marrow-made cells; this cell is the daughter of that; these have no relation. With each new stain are the granulations multiplying rapidly and, worst of all, the technic is long and results uncertain. And what does it all amount to? With all these studies in stains do we know much more than a fresh specimen would teach us? With all these names which label cells with a source, do we know any more of the origin and relationship of leucocytes than Virchow knew fifty years ago? Very little. I don't wonder Ehrlich changed the subject. Has since the work of Neumann and Bizzozero one well accepted fact been added to our knowledge of the origin or the structure of the red corpuscles or their relation to the leucocytes? No. Is it necessary for the busy practitioner to spend hours getting his stained specimens? A most emphatic, no. We have satisfactory methods which give beautiful specimens in three minutes, and he doesn't look at fresh specimens nearly long enough. A trained man can guess at a blood-count and hemoglobin percentage and often get it closer than a less experienced man can with counter and hemoglobinometer.

And the uric acid diathesis. What shall we say of that? Can clinical chemistry deal it any harder blows than it has received? Yet many still would insist that uric acid is really important. Thirty-nine separate morbid conditions are already ascribed to it and the fortieth recently added by an oculist, astigmatism against the rule! Now we know something, not much, about uric acid. We know it is a product of metabolism of proteid. We know the body can also form it by the synthesis of simpler bodies. We know no small part of that which is excreted is from similar bodies in the food and, lastly, that the body can oxidize uric acid. Hence it can not be considered the criterion for the metabolism of any one proteid body. We deny any relationship well proven between an increase of uric acid and leucocytosis; we deny that an increase has been well proven in any disease except fever and leukemia. We do not doubt but that the clinical picture is well marked which bears the name uric acid diathesis, but we do ask does uric acid have any more to do with it than has science with "christian science"?

In conclusion I make a plea for the more general use of the clinical laboratory. The practitioner depends on the bacteriologic laboratory because he knows he can not do this work. Should he not depend almost as much on the clinical laboratory? There are no tests more frequently made by a practitioner than the albumin and sugar tests; can he do these in a doubtful case? He should the former, yet we are certain many a faint trace escapes notice, but the latter he can not in a doubtful case, do, and not now so well as he could a few years ago. An illustration may explain this. Not long ago a patient in a distant city brought us a bottle of urine with the question, "Is sugar present?" The urine reduced copper fairly well, Nylander's test was decidedly positive. Here the physician must have stopped, yet these two tests do not prove sugar. The urine was not dextro-rotatory, it would not ferment, an increase of glucosazon crystals could not be determined, and in a doubtful case all of these tests should be found positive before glycosuria is diagnosed. But what was present? The patient when questioned solved the difficulty. When told to send another specimen and to add camphor to keep it in good condition she replied, "But my doctor told me something much better than that, he told me to add formalin." Formalin is the aldehyd of formic acid, glucose the aldehyd of sorbite and they both reduce copper and bismuth well. I then read clinical chemistries on the subject. One, the most pretentious in this country, advises to add a few drops of formalin to the urine to preserve it. If this advice is followed and it certainly will be by many, what will save the practitioner from finding sugar in many urines? Of course, we know that the text-book says "two or three drops, not more," and a very few drops in a twenty-four-hour specimen will not

trouble the chemist very much, but the "two or three drops" in a four-ounce bottle of the patient who wishes to do the matter thoroughly will, and in this case did, give a splendid reduction test. Almost at the same time another specimen was sent. It reduced copper and bismuth well, but the practitioner was sure it was not glucose, it must be lactose since the patient was pregnant. If lactose, its presence was of no moment; if glucose, of the greatest moment. Hence we say the practitioner in a doubtful case often needs a clinical chemist to aid him, especially if he believes in Nylander's test and allows his patients asparagus. In this connection I would say that one of our students recently showed us that thymol, an excellent preservative for urine, can impart to it good Gmelin-bile-reaction-giving properties. If the practitioner has sent to him a highly-colored urine with a crystal of thymol in it let him beware of making the diagnosis of bile in the urine. The practitioner, on the other hand, does not do nearly enough of some chemistry. With a few test tubes, reagents and a burette, he can do a surprising amount if he will, but let him send doubtful cases to the expert—and cryoscopy to any one with more time than he.

A PLEA FOR THE EARLY TREATMENT OF SQUINT.*

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The majority of laymen and a great many of our professional brethren regard squint with a great deal of indifference. This arises largely from the prevalent idea that the child will outgrow it, is too young to be treated or, if treated, will have to always wear glasses. Yet when children grow up with this horrible deformity, they and their parents often seek for relief without success. What I wish to try to make clear is the fallacy of the above reasons, why the squinting eyes of children should be attended to as soon as the first appearance of even a tendency to squint is noticed.

1. In rare instances in some cases the squint disappears as the patient grows older, but nearly always with vision much impaired in the deviating eye and binocular vision very imperfectly developed.

2. The earlier one can get a case after he has commenced to squint, the better the prognosis as to the parallelism of the eyes, binocular vision and visual acuity of each individual eye, because the case is in the developmental stage.

3. In regard to wearing glasses, the contrary is true. If a case can be obtained for treatment soon enough after the squint is noticed, the glasses, in the majority of cases, can be laid away about or soon after puberty, being only needed for close application of the eyes, except, of course, in cases of high hyperopia, myopia or astigmatism.

These deductions are reached through the latest theory advanced by Mr. Claud Worth of London regarding the etiology of squint, i. e., that the potential factor in the cause of squint, of course taken together with the several other etiologic factors, as hyperopia, myopia, anisometropia, congenital amblyopia, fundus changes, changes in the refractive media, heredity, local changes in an ocular muscle, etc., is the defective or non-development of the fusion sense.

We all know that binocular vision is produced by similar portions of the retina being acted upon by rays of light and these afferent sensations fused centrally. Now, if the condition of the eyes is such that through hyperopia, myopia, anisometropia, congenital amblyopia or any of the above enumerated etiologic causes, which produce central sensations of different intensity, the sensation carried to the brain by the poorer eye can not compete with the clear, distinct image of the better eye and is disregarded, as we disregard the image formed by its fellow when we use the microscope with both eyes open; the eye is thus without a point of fixation and turns in or out. This occurring at a time when the fusion sense is in the process of development and the eye receiving no help in the way of improving the retinal image so it can compete with the fixing eye, the fusion sense is defectively developed or lost, and the eye remaining in the mal position, the squint is established and the organ becomes more and more amblyopic from non-use. The eye usually turns in in hyperopia as the relation of convergence and accommodation converges the visual axis. Instead of both eyes appearing to converge equally, the better eye fixes and the poorer eye turns through the additional arc to allow of this fixation. This explains also the so-called alternating squint, when the patient fixes with one eye or the other, the one eye turns through an additional arc to allow its fellow to fix. In myopia the general tendency is for the eyes to diverge; this is explained on the ground that the myopic eye not having to accommodate there is no effort to converge, consequently the eye diverges.

Then come the class of cases where there are no refractive errors or any of the before-mentioned etiologic factors; yet the child squints. The history of these cases usually develops that the squint commenced after a fright or during an attack of whooping cough or followed some severe illness, and is explained by the fusion sense being in a rudimentary state of development; it is thus rudely interfered with, the fusion center greatly disturbed and binocular vision thus lost for a time and one eye or the other allowed to deviate from parallelism.

The fusion sense, Mr. Worth has determined, is fully developed by the sixth year; after that the question of establishing it is almost beyond hope.

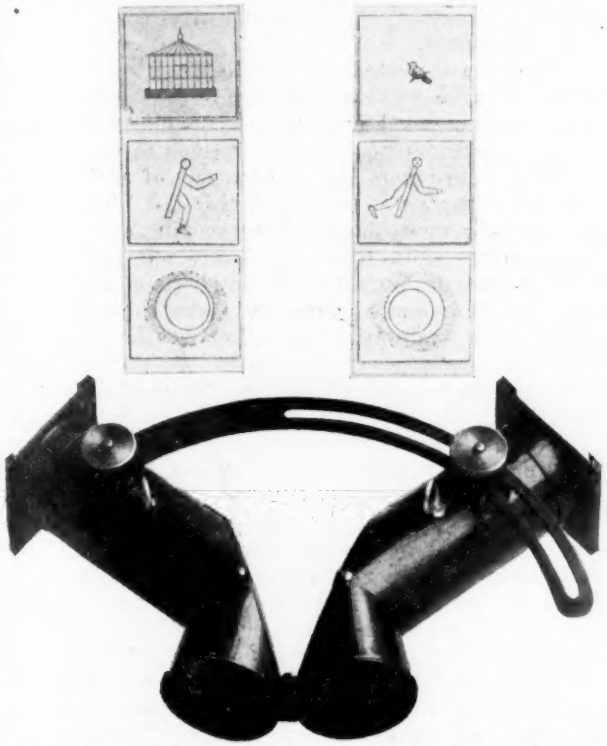
The factors to be dealt with in a case of squint are: 1. The deformity. 2. The suppressed vision of the deviating eye. 3. The more or less amblyopic condition of the deviating eye in the majority of cases. 4. The refractive errors. 5. The fusion sense.

The suppressed vision of the deviating eye produces a loss of central fixation, that in turn causes a deterioration of the vision in the deviating eye, as the rays of light are focused on other portions of the retina than the visual center or fovea and the eye becomes amblyopic; so in our treatment the first step is, after measuring the angle of the squint, to prevent the loss of central fixation and so prevent deterioration of the deviating eye. This is accomplished by refracting the eyes, fully correcting the hyperopia, myopia and astigmatism and ordering glasses to be worn constantly. The determination of the visual acuity is first desired for refraction and this is accomplished in cases who are not old enough to know their letters by the aid of five ivory balls, from ½ to 1¼ inches in diameter in the following manner: By covering the poorer eye of the patient and starting a game of marbles with him. The mystery is solved! If at 5 meters he can go directly for the smallest ball without hunting about for it, it is safe to say his vision for that eye is about normal, then trying the other eye in the same manner, its visual acuity is determined approximately.

* Read before the Milwaukee Medical Society, April 22, 1902.

The errors of refraction are then determined under mydriatic by the skiascope. The child's disposition has a great deal to do with his wearing the glasses, but in cases of considerable degree of refractive error (3 and 4 D.) no trouble is experienced. I have seen 18-month-old babies with glasses who would commence to cry as soon as the glasses were removed and would stop the moment they were replaced.

After the visual acuity is brought as near normal as possible the next step is exercising the deviating eye. This is done by bandaging the fixing eye continuously for a long period of time (which the majority of parents will not do), or better still, by the use of a mydriatic in the fixing eye to abolish its power of accommodation. The child will then fix for near objects with the deviating unatropinized eye, and use the atropinized eye for distance. Thus amblyopia from disuse is avoided. The parents find no trouble in instilling a drop of some mydriatic solution in the eye each morning, but seriously object to the child's eye being continuously bandaged.



Amblyoscope and Series of Slides.—The bird and cage being used to establish binocular vision only. The second set requiring true fusion to complete the picture. The last when fused gives an impression of the perspective.

In cases where the vision of the deviating eye can not be made to compete with the fixing eye, then continuous occlusion must be resorted to in order to bring about central fixation. If this has been lost only a short time, two or three weeks is usually sufficient to restore fixation, but in neglected cases, where the eye has become quite amblyopic and central fixation has been lost for a long time, much improvement can not be expected, although some surprising results are accomplished. A mydriatic used in both eyes is worse than useless, as the visual acuity remains proportionately the same and although the eyes seem straight under the mydriatic, it is only because the accommodative effort is paralyzed and consequently there is no effort to converge.

The fusion faculty is next exercised by the ingenious instrument devised by Mr. Worth called the amblyoscope. This instrument consists of two halves joined by a hinge, each half consists of a very short tube joined to a longer one at an angle of 120 degrees; a mirror being placed at the cord subtending the arc of this angle; an object glass is placed at the free end of the longer tube, at the free end of the shorter tube is a lens, the focal length of which equals the distance of the reflected image of the object glass at the end of the longer tube. "The two halves of the instrument can be brought together to suit a convergence of the visual axes up to 60 degrees, or separated to suit a divergence of as much as 30 degrees."

"The pairs of object slides are drawn on translucent paper and stuck on glass slides. These are of three classes. The first class consists of pairs of devices, such as a bird and a cage, a mouse and a trap, etc. These require no blending of images, but only binocular vision. The second class consists of devices, part of which are on each slide, so that a blending or fusing of the images must take place in order that the full picture may be seen. The third class consists of stereoscopic pictures, which when combined give an impression of perspective."

The instrument is used in the following manner: "The child with his correction on is held on the surgeon's knees and the amblyoscope roughly adapted to his degree of deviation; it is then held before the child's eyes and an electric lamp is put in the axis of each tube about four feet away. By a simple mechanical arrangement each lamp is easily brought nearer to, or put farther away from the tube which it illuminates. A slide showing a cage, for instance, is put in the tube before the child's fixing eye, and a bird in that before the squinting eye, and the child is told what to look for. At first he sees only the cage. The lamp before the fixing eye is then taken farther away, and that before the squinting eye is brought nearer until the child sees the bird. By this time he has lost sight of the cage. The intensities of the illuminations are then adjusted until the child sees both the bird and the cage. The child is then allowed to grasp the instrument and, assisted by the hands of the surgeon, is taught to vary the angle of the instrument so as to make the bird go in and out of the cage. Many other similar pairs of slides are shown. The average child of 3½ or 4 years of age takes a very keen interest in the game which he imagines has been devised merely for his amusement. Slides which require a true blending of the images are then shown. After a time it is often found that the angle of the instrument may be altered to a very considerable extent, either in convergence or divergence, while the eyes follow the objects and maintain fusion of the pictures. One often gets a powerful "desire" for binocular vision in these young subjects with surprising facility. The next step is to equalize the intensities of the lights. This may usually be done at this stage without a return of suppression. In many cases one is able to deviate the two halves of the amblyoscope more and more at each visit until parallelism of the visual axes is obtained. In other cases operation may be necessary. If, then, the eyes are placed approximately straight, the desire for fusion will fill up any slight gap that may remain. However the actual remedying of the deviation may be affected, if the child has this powerful desire for fusion, which can only be acquired in early childhood, a perfect cure of the squint results. The child will then, in the majority of cases, be able after a time to lay aside his glasses except for reading."

The use of the stereoscope with properly selected pictures, after the visual axes have become parallel or the eyes have been straightened by operation, will greatly aid in the exercise of the fusion center, but is of no avail before the visual axes are approximately parallel. Dr. Würdemann's modification of Kroll's orthoptic ex-

ercises in black and white are especially adapted for this exercise.

"The special points of the amblyoscope are: 1. It is adapted for the use during the continuance of a squint of any degree; 2, the suppression of the vision of the deviating eye is quickly overcome by the unequal illumination of the object slides, instead of by the slow and painful method, recommended by Javal and others of continuous occlusion of the better eye for months or a year at a time; and, 3, the variety of the pictures amuses and interests the child, so he will give all the help he can."

To summarize: The treatment of squint should commence as soon as the slightest deviation of the eyes is noticed and should consist of:

1. The maintenance of fixation in the deviating eye to prevent deterioration of vision in that eye.
2. The correction of all refractive errors.
3. The exercise of the fusion faculty and when that is well developed, if the deviation is not corrected, resort to operative measures to produce approximate parallelism of the axes; the desire of fusion developed by the exercise of this center will then maintain parallelism and binocular vision.

105 Grand Avenue.

ATTENDANTS AND NURSEMAIDS.*

LESS EXPENSIVE AND LESS EXPERT SERVICE NEEDED—CLASSES BY PHILANTHROPIC ORGANIZATIONS—MEDICAL INSTITUTIONS FOR THE SICK THE PROPER ONES TO GIVE SUCH INSTRUCTION—THIS GRADE OF HELPERS WOULD RAISE THE STANDING OF GRADUATE NURSES.

HELEN C. PUTNAM, A.B., M.D.
PROVIDENCE.

There is a wide-felt need and legitimate demand for women to care for the sick who shall be less expert and less expensive than graduate nurses. Among those of generous fortunes the demand comes from chronic invalids needing waiting on for months or years; from victims of slight ailments, as a broken arm or brief exhaustion in overwork; from tardy convalescents of all grades of income above the very small (who must get well as they can). Graduates usually, if not always, do not wish to take these cases. A not less pressing demand comes from the large army of families, self-respecting bill payers, living on $500 to $1500 a year, to whom $18 to $30 weekly is a heart-aching burden almost impossible for even two or three weeks; where the mother's hands "keep" the house, and it is perhaps she who is laid by. Visiting nurses can not satisfy this demand (resident service is wanted); nor can hospitals by sending undergraduates; and such families are far from being objects of charity. Its supply has come mainly from obliging friends and "experienced nurses," the number of the latter being far from sufficient and the capabilities of all wholly uncertain.

To fill the need various philanthropic societies, such as women's educational and industrial unions and young women's Christian associations have recently conducted "classes for training attendants" or "for home nursing," where, at an expense varying from $10 to $30 for each pupil, a course of twenty to thirty evening lessons (of one or two hours) has been given by a graduate nurse, sometimes including lectures by physicians. Occasionally five to ten lessons in invalid cooking supplement it, and visits with a district nurse or to the city hospitals. The lessons consist of lectures or text-book work, note-taking, quizzing and a little manual drill in care of a bed and of a "patient" (model) in bed, handling of bed-pans and douche-pans (dry), syringes, thermometers and medicine glasses, and plain bandaging.

The pupils are workers in offices, factories, stores, sewing-rooms or kitchens; sometimes an "experienced nurse," a housewife, a schoolgirl, and often unoccupied women. Ages are nominally from 18 to 40, actually from 15 to 60; education nominally required equals first year of grammar school, but actually ranges from bare ability to read easy English and write with difficulty up to that of a well-educated gentlewoman. Moral and other personal qualifications have as wide a range. Some classes limit membership to twelve, others have as many as thirty members. The examinations and certificating are equally elastic, such courses being subject to the pecuniary, philanthropic and impulsive irregularities that invariably obtain outside of any but an organized school in a hospital or sanatorium of recognized professional standards.

Some take the course for use in their own families; others to make nursing their work; others to do occasional neighborhood nursing, a congenial field of usefulness that gives them a little income to add to home comforts; and others take it as a part of an intelligent woman's education. It is with this last idea that our very few pioneer schools of housekeeping and our manual training public high schools are offering excellent short courses in nursing. Young women occasionally take the attendant's course to make their first year easier in the training school, often by the advice of a graduate; or "discover themselves" in the course and elect to go on to regular training. Some of these testify that the theory and invalid cooking are better taught outside, as is quite probably true, organizations often selecting expert teachers from among the best in the city. Such facts are suggestive to managers of training schools. So pressing is the demand for less expensive (and less expert) care that, although many such classes "pledge" their graduates to charge but $5 or $7 weekly the first year (while "getting experience"), it is a fact that some charge within six months $10 to $15 because they can get it. Of course more receive only $7. The claim to "have a certificate" satisfies those who could and would nurse their own sick if they but had another pair of hands. They save from $13 to $3 a week (from graduate's pay) and obtain the help they must have.

What kind of help? As to quantity, they have probably a reasonable amount of service about the home when the patient does not require attention. This is what the family needs, and from an humanitarian viewpoint it should be so—so far as it does not overtax the helper. As to quality of nursing, it is precisely what would be expected from such varieties of "standards" and of pupils, after thirty to fifty evening hours of instruction, chiefly theoretical. However willing, anxious for personal credit, enthusiastic out of pure altruism, they may be, it is the exceptional women who earn (economically speaking) $7 a week and board; and they quite often deserve it without "the course." It is usually the smallest wage-earners (therefore the more incapable) who take it up as a business. The average attendant does not equal the average "experienced nurse" or the average mother, either in judgment, reliability or capacity, the lack being chiefly along the line of experience. The majority of mothers can, by

* Read before the Providence Medical Association, Feb. 3, 1902.

following the visiting physician's directions, use the clinical thermometer; or give an enema, a douche, a sponge bath with more skill. Another serious defect is the unconscious assumption of too great responsibility, because of inefficient instruction as to limits of initiative and as to accuracy in reporting. Physicians must ordinarily accept the caretaker a family provides and naturally believe that she can render the simple service claimed. A tidy room, pleasant manners and friendly relations with the patient innocently deceive concerning the necessity of minute inquiry into omissions and commissions.

Not unreasonably graduate nurses deplore this movement, as is indicated by several paragraphs in their official organ, *The American Journal of Nursing*. The time has arrived when friends of training schools for nurses and of the people would do well to try to adjust the matter more fairly.

It would show good business sagacity on the part of medical institutions for the sick to supply this demand and so "control relative market values"; and good judgment to acknowledge its legitimate existence and therefore their willingness to serve society by preparing caretakers of simple ability and price. For "lay" organizations to undertake what should be the function of medical institutions is another instance of waste of philanthropic resources, the hospitals having already secured, usually by gifts, the material equipment and educational qualifications for instructing in care of the sick, while "the laity" must divert still more charitable effort in crude attempts along similar lines. Since the popular need as outlined is a very large and just one, both common sense and professional enterprise indicate hospitals and sanatoria as the proper agents to fill it.

Nursemaids for children, who shall have rudimentary scientific and manual training, are also in demand. The day of unskilled service for making homes and laying the foundations of adult careers is, happily, dying. Science simplifies serving. There is no lack of women able to take in the necessary instruction, and to fill situations for wages on a par with average house service. It requires certainly no rarer mental ability than that of good waitresses and cooks and not so much muscular strength; it is a matter of fact that the "second girl" who "likes nursing" often learns to do very acceptably such of it as she has time for, but necessarily her regular work suffers. It is more congenial —either the care of invalids or of children—to many temperaments which at present recruit the ranks of inefficients. Their ability is of an order that may be turned to use by a few months of careful instruction, for which a temporary home and $3 to $8 or $10 a week is good remuneration in comparison with that in some other occupations which require even more preparation.

It would be a mistake in such a course to encourage narrowness of ideas as to range of services and rate of wages. An attendant who gives grudgingly of needed help, especially in modest homes, where the invalid does not require all her time, lacks the quality of effectual sympathy indispensable in a service so personal and so humane. It is carrying "specialization" to unrighteous limits that belittle character.

This undertaking should not conflict either with training-schools or with philanthropic efforts. Of the latter I venture the prediction that, if a hospital opened a minor course in nursing, a frank explanation to the organizations already offering these classes would meet with the enlightened coöoperation desired, probably withdrawal of its own course and influencing women to avail themselves of the better facilities, with one proviso, viz., that the hospital offer a course that *accords with the need*—faithful simple manual service, good as far as it goes, and going far enough for non-critical illnesses and for slender incomes.

Instead of undermining the dignity and valuation of expert nursing by poor and over-paid service, these attendants would help teach sanitary knowledge to larger numbers, and create higher ideas of the superior rank of nurses. There would be a defined grade between the latter and "chaos," tending to encourage development "at the top," where there is always room.[1]

Attendants secure work through the individual influence of members of the large associations offering the courses and through their registers; or, often, through their own acquaintances who are frequently of the class, as has been already intimated, who have not been a "field" for graduate nurses.* They rarely use the regular public registers. Just what conditions obtain in Philadelphia I do not know; but, in the great majority of cities, action such as the recent one of exclusion from the register of the College of Physicians would have a moral and theoretical influence, but no appreciable effect upon the actual employment by the public of minor nurses. *Laissez faire* policy is apt to accomplish little in comparison with wise aggression. "Classes for training attendants" are a natural growth the object of which is not to supplant but to supplement regular training schools along a line where hospitals leave a large public need unfilled. The "wise aggression" would be to coördinate the two, under professional management, to avoid trespass and many other injustices.

This logical enlargement of hospital service to the community would have inertia chiefly to overcome and some active opposition. A medical superintendent of tact and executive initiative could so demonstrate its wisdom and practicability, that public opinion would place his experiment at the head of an educational movement in hospitals corresponding with the twentieth century popular movement towards more general understanding of scientific subjects—one of the best possible preventives of quackery and *antis*.

The teaching force can be recruited if necessary, and probably advantageously, from city nurses and physicians; many a free-bed convalescent will gladly earn a fee by serving as model; tuition expenses must be small; hours must be adjusted by the fact that the pupils usually have regular occupations. Whatever flexibility in admission may be expedient, there should be rigid adherence to the standards adopted, an important part of the necessary moral disciplining; and the actual conditions be thoroughly studied in order to train women satisfactorily. Finally such an *esprit de corps* needs to be organized (possibly by a club, a uniform, or, better, a badge *bearing the name or symbol of the order*) that they will take pride in maintaining just relations with graduate nurses, as much as with physicians, and, as to patients, will be mindful of their mission of helpers in homes. A simple and attractive name should be devised, "nurse" being substituted now by families in place of the formidable trisyllable "attendant."

The superintendent of a training school who sympathizes as intelligently with the need of the people as she does with upholding the standards of her school, has in

1. See Dr. Cabot's paper, Boston Med. and Surg. Jour., Nov. 21, 1901.

* They do not work among the very poor, whose usually greater needs are beyond an attendant's ability, and who are, as a rule, provided for by visiting nurses and hospitals.

this a fruitful opportunity to minister to altruism. Chronic cases, slight ailments and thrifty people on small incomes furnish the larger part of physicians' practice. The public must of necessity have workers in this field, if not instructed, then "experienced" or otherwise as hitherto. Artificial limitations of teaching that every home-maker ought to have should not and can not prevail.

This article is not to be misunderstood as advocating lesser preparation or prices (although prices might well be more adjustable) for nurses ranking like the present graduate. The three logical and practicable grades of nurses are "attendants" for light nursing, for nurses' assistants, and for nursemaids; "graduates" for serious illnesses; and nurses of more advanced training for institutional work (in army, training schools, asylums, hospitals, public health departments, philanthropic aid societies, etc.); as, for instance, the majority of people leave school with a "working basis" for "every day," fewer are graduated from college equipped for more specialized service, and fewest go on to advanced professional schools.

THE EVOLUTIONARY ASPECT OF INFECTIOUS DISEASES, WITH ESPECIAL REFERENCE TO THE LOCAL VENEREAL DISEASES.*

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CHICAGO.

(Concluded from p. 1291.)

The light factor of environment is very important in the life history of micro-organisms. In general, bacteria flourish and wax fat in the absence of light. To many pathogenic micro-organisms light—especially direct sunlight—is fatal. In rare instances, as in the case of Englemann's bacterium photometricum, light increases activity. I know of no pathogenic germs in which the reverse does not prevail in greater or less degree. That temperature is an important factor in micro-organic life is so familiar that I would not allude to it were it not so vital in its relations to the evolution of infection. Bacteria have been found that multiply at 0 C. Certain water varieties spore in water covered with ice and freezing does not kill them, but most soil and water bacteria thrive best at about 20 C. although they begin to multiply at a lower point. Germs have been found which grow only at a temperature high enough to alter proteid, 54 to 77 C.[5] It is evident to any one who does not accept the Mosaic cosmogony that the primal environment of the micro-organic world was relatively warm and almost if not quite uniform. The variation in temperature requirements which we observe at the present epoch means a gradual differentiation and a slow but certain adaptation to environment which always brings in their train new properties, be the germ pathogenic or non-pathogenic.

Some of the laboratory experiments proving the necessity of special conditions in the life history of pathogenic microbes are very pertinent and suggestive. Take, for example, that most virulent disease, anthrax. Dogs succumb to it only when pure cultures are injected intravenously. Young rats die of general infection while older ones develop only small abscesses, unless a large number of bacilli be injected directly into the circulation. Frogs and tree toads are resistant at medium, and susceptible at higher temperatures. Fowls resist anthrax ordinarily, but if they become chilled they rapidly succumb to it. Pigeons resist it save when semi-starved.[5]

It is noteworthy in this connection that the tetanus germ is inoperative save when inoculated simultaneously with foreign material, such as splinters of wood, dirt and pus. How familiar the foregoing facts sound to the student of a quarter of a century ago. Age, exposure, innutrition—lowered resistancy—special conditions, as invitations to contagion. Really, specific science has not yet done away with old-fashioned things. The pneumococcus is the specific microbe of pneumonia, but for some reason it often demands a chilling of the cutaneous surface in order to flourish and wax fat in the lung. In genito-urinary infections of a low grade, circulatory disturbances, internal blood metastasis, or traumatism is necessary to virulent development. Note, for example, cysto-pyelitis from sudden relief of prolonged retention, exposure to cold, shock, or operation trauma. Here indeed is food for thought. How unfortunate that we can not duplicate in the laboratory the conditions natural to the germ. How much more modest should be the claims of modern bacteriology. The accurate laboratory observation of to-day is a *sine qua non* of medical philosophy. Medical philosophy, both past and present, should be the foundation on which to build the material research of the present.

Anent the specificity of pathogenic organisms, it is of interest to note the evidence of evolutionary adaptation shown in the susceptibility of some animals to organisms to which other species are absolutely resistant. A point which throws the specificity of micro-organisms within at least the shadow of a doubt, is the fact that large quantities of harmless bacteria injected into the mammalian circulation may prove fatal because of the dead bacterial proteid contaminating the blood. Dead cultures of bacillus prodigiosus, or of the hay bacillus, are as certainly fatal as dead cultures of disease germs, and often as surely fatal as cultures of living pathogenic organisms. This observation throws much light on the relation of micro-organisms to disease and shows how narrow the specific influence of germs may be when disassociated from the effects of their metabolic products and dead and dying proteid. This point alone shows how broadly infection should be studied if it would be understood.

One of the most fascinating micro-organisms for study along evolutionary lines is the bacterium coli commune. The precise relation of the colon bacillus to the bacillus typhosus of Koch and Eberth is a matter of wide difference of opinion. The differences between the colon and typhoid bacillus are by no means irreconciliable on the score of evolutionary changes in what, by your leave, I will term the normal germ—the colon bacillus. Whether this germ is, as some believe, an oeco-parasite which, under as yet undetermined favoring conditions, acquires the ability to invade the animal body and there become transformed into the bacillus typhosus may be open to question, but the theory is at least rational enough along evolutionary lines. What is really known of the ubiquitous colon bacillus would lead one to expect even more remarkable performances from it. That this germ is normal to the intestine is tolerably certain; that it was always normal is less so.

* Lecture delivered by invitation before the Buffalo Academy of Medicine, Jan. 21, 1902, and Creighton Medical College, Omaha, Neb., March 5, 1902.

5. Hueppe: Prin. Bact.

The bacterium coli commune as it exists at the present day may be an evolutionary descendant of some organism which was distinctly pathogenic—perhaps akin to the bacillus typhosus as we know it. On this hypothesis the pathogenic properties of the germ as we observe them, and its possible transformation into the typhoid germ, would be rationally explicable on atavistic grounds. The versatility of this normally non-pathogenic micro-organism is marvelous. In the first place it is not only harmless when its environment is undisturbed, but apparently has a physiologic function to perform. The relief of chronic constipation by the administration of a pure culture of the colon bacillus is strongly suggestive in this direction. From a harmless intestinal saprophyte our colon bacillus may change into an organism which produces lactic acid fermentation in sugar and forms a brown pigment on potato. Considering the versatility of the colon bacillus one might not be far astray in inferring that the normal urethro-coccus has somewhat similar properties of adaptation and variation. Such indeed is my own belief.

The instances of micro-organic transformation observed experimentally are quite numerous, but a few of the most familiar examples are all that is required to illustrate the principle. The bacillus anthracis has been converted into a harmless putrefactive organism. Pasteur in his early experiments showed what could be done, first, with chicken cholera, and, secondly, with practically all disease germs by culture. He was able to play upon the virulency of micro-organisms with astonishing results; the range of effects varying from *nil* to extreme toxicity. Strange though it may seem, the profession at large did not grasp the meaning of Pasteur's results. A great biologic law had been established by him. Pasteur had neither added to nor subtracted from the phenomena of nature. He had given us merely a feeble imitation of what nature accomplishes under conditions which mortal man has not yet succeeded in producing.

Not only have disease germs been transformed experimentally; the bacteria of butyric acid, lactic acid, and pigment bacteria have been similarly modified. Both diminution and increase of the pathogenic, putrefactive, fermentive and pigment-forming powers of bacteria have also been shown to occur under natural, i. e., non-experimental and spontaneous conditions. The action of bacteria is constant only so long as their environment is the same. A very significant observation is the discovery of virulent Klebs-Löffler bacilli in healthy persons as oeco-parasites which may under favoring conditions produce diphtheria by either auto- or hetero-infection. Virulent diphtheria germs lose their virulency by culture and become saprophytic. It has been claimed by Roux, Frankel and others that the non-virulent diphtheria germs found in healthy throats are merely true diphtheria germs "which have lost their virulency." Had these investigators said, "which have not yet evolved to the phase of virulency," they might have been nearer the truth, although the view expressed by them solves a part of the problem.

It seems to me that the conflicting observations on diphtheria germs should command caution, at least. How much would one be justified in swearing on the witness stand? The observations of oeco-parasitic diphtheria germs and the observations of Roux, Frankel, Hueppe and others are alone sufficient to discredit any dogmatism in diagnosis. The study of the numerous and varying observations of diphtheria and its congeners has some bearing upon the possible origin of the gonococcus. It requires no wild flight of the imagination to conceive that the urethro-coccus bears the same relation to the gonococcus that Roux and Frankel claim for the Klebs-Löffler bacillus, the pseudo-diphtheria bacillus, and the oeco-diphtheria parasite.

The bacillus tuberculosis, Koch's pet specific micro-organism, has more of those properties which we are wont to term specific than most germs. Even the differences between the germ of fowl and that of mammalian tuberculosis appear at first sight distinctive. Hueppe and Fischel, however, by varying culture conditions so modified the mammalian germ that it grew like that of fowls, and vice versa. *Pari passu* with this transformation in growth property, an interchangeability of virulency developed, and the fowl became susceptible to the mammalian germ, and vice versa. Koch's latest dictum regarding the independence of bovine and human tuberculosis may be shown to be most vulnerable along these lines. Evolutionary adaptation and nutritional modification must needs differentiate human and bovine tuberculosis, but this does not militate against their interchangeability through atavism or otherwise. Least of all does it disprove their community of origin. In the study of germs we are ever confronted by fundamental evolutionary law, not in part, but as a whole. Tuberculosis is no exception to the rule. The same law of progression has affected both parasite and host. Both are so individualized that the species remain distinct.

I will admit that, as Theobald Smith has shown, the qualities of pathogenesis displayed by human and avian tuberculosis vary widely, but this is to be expected. The human being and the fowl bear the same comparative relations to the germ as do different culture media to any given pathogenic germ in the laboratory. The variation of virulency incidental to the passage of a given germ through different animal species—a most familiar experiment—bears eloquent testimony for the evolutionary theory of infectious diseases. The animal body modifies the germ just as all other environments do. The relatively high temperature of fowls as compared with mammals necessitates adaptation changes when the tuberculosis of the one is inoculated upon the other, and is alone sufficient to explain a spontaneous variation in type. McFarland[6] has made some interesting observations bearing on germ adaptation in general. He says: "The flagellate bacteria have a greater number of representatives among those whose lives are spent in water and in fermenting and decaying materials than among those inhabiting the bodies of animals. It may be added that parasitic disease producing bacteria which do not habitually gain access to the tissues but inhabit the intestines—such as the bacillus of typhoid—are actively mobile like the saprophytes, while those habitually entering the tissues and multiplying there are motionless and without flagella." The so-called facultative parasites and saprophytes, which possess the power of so adapting themselves to their environment that they can become either saprophytic or parasitic—warring indifferently with the living or the dead as best suits their ends and needs—show adaptation to environment and are sufficient alone to establish a principle.

It is a noteworthy fact of evolutionary suggestiveness that the relation between bovine and human tuberculosis is closer than either fowl and human or fowl and bovine. Koch said long ago on this point that fowl tuberculosis is hardly to be considered as a factor in the etiology of human tuberculosis. He is now of similar

6. Bacteriology, McFarland.

opinion as to the relations of bovine and human tuberculosis. Nocard, Fischer and Hueppe, however, have shown the bovine to be transformable under proper conditions into the human variety and vice versa. No matter what clinical differences may exist between fowl, human and bovine tuberculosis, their co-relation is hardly open to controversy, and, when viewed from the evolutionary standpoint, prophylactic negligence based upon Koch's dogmatic position is fraught with ultimate danger. We should deal not only with the germ but with his ancestry and entire kin. Our warfare against pathogenic germs should be patterned after the Kentucky feud, in which fine distinctions of relationship are not usually drawn.

Not the least important of the germs that show experimentally inconstancy and a versatility explicable only on evolutionary grounds are, the cholera bacillus, which forms a yellow or brown pigment on potato and causes acid fermentation in saccharin solutions, the germ of glanders, forming brown pigment on potato, and the micrococcus pyogenes aureus, producing acid fermentation in sugar and a rich yellow pigment in cultures. Such observations are sufficient alone to upset Cohn's arbitrary classification of germs into pathogenic, chromogenic and zymogenic.

The practical side of the evolutionary view of bacterial life is obvious. Slowly but surely we are drifting from the untenable ground of unvarying specific entity to the safer belief that the soil in which the disease germs are sown and the conditions surrounding them are all important. In surgery, especially, we have learned the lesson that absolute non-infection of wounds is almost, if not quite impossible. When an environment unfavorable to germ development is provided, relative asepsis is secured. The tissues dispose of a greater or less quantity of more or less virulent germs if the latter have nothing to feed upon. *Mann ist, was er isst.* So, too, with the parasite that feeds upon him. Man is to the germ as macrocosm to microcosm.

The germ as the *causa prima* of disease can not well stand. Von Liebig was not so far wrong when, in his criticism of Pasteur's views of bacteria as the cause of fermentation and disease, he said, "One can not see causes."

It gives me great pleasure to reiterate to-night what, in substance, I said nearly twenty years ago, on the relations of bacteria to disease. As I expressed it then, "The tendency of modern research has been to seek for a specifically constant germ to fit a specifically constant disease, and then for a specific remedy to kill the germ." The etiology of disease will never be placed upon a secure foundation until the causes of the transformation of innocuous into pathogenic micro-organisms have been found. These conditions having been found, it will then be incumbent upon the scientist to determine the conditions under which the germ, once become pathogenic, best thrives and presents its most virulent properties, and vice versa. Less microscopic dogmatism and more biologic reflection is necessary. So far as the infectious diseases are concerned, the scientific light of the future must, it seems to me, be reflected along these lines. The trend is certainly in this direction at present. To this modern trend are we indebted for our serum-therapy, which is in effect a revival of old-time theory and practice.

With proper facilities for study, the venereal diseases should be models of accessibility for such research as I have suggested. Once understood, they would assist us in elucidating many important problems involving other infectious diseases. With all due respect to the modern school of pathologists, I venture the opinion that we are still in the period of venereal confusion so far as etiology and pathology are concerned. True, we now have the one venereal disease of the great John Hunter resolved into three. We have even captured the gonococcus, but I venture to assert that we are not much nearer the primal causes than we were before. Indeed, I suspect we are further away, for in direct ratio to the assiduity with which we pursue specificity in germs, will be our departure from those lines of true scientific study of gonorrhea by making the ultra-enthusiastic advocates of the germ self-sufficient. With them it was not necessary to go further. The gonococcus has been a veritable venereal *pons asinorum* to some, with whom it causes all and to whom it explains all. I wish to record the opinion here that the true etiology of gonorrhea lies behind the gonococcus. Some of the profession have even begun to lose faith in the ubiquitous gonococcus in his own peculiar field—arbitrary diagnosis. It has come to pass that those who go beyond "the optic sharp I ween which sees things that are not to be seen" are rather skeptical about the ordinary office diagnosis of gonococci. As time goes on the gonococcus will grow less and less important and the conditions governing the evolution of the germ, and especially the evolution of virulent properties in primordially innocuous germs, will be known and will comprise the etiology of gonorrhea. I hope that some of us at least may live to see the realization of this prophesy. What has been said of gonorrhea applies with equal force to chancroid, save in that a definite germ in this disease has not yet been established, but all of us have observed clinically wide variations of results of local venereal infection, embracing as it does all grades of inflammation and tissue change from a simple urethritis or simple balanitis on the one hand to a virulent chancroid or gonorrhea upon the other. Giving due credit to the element of germ infection, observe how its importance is minimized by environmental influences.

It is my firm belief that gonorrhea and chancroid develop *de novo* in the medium afforded by the secretions of the unclean and pathologically contaminated vagina. This development depends upon adaptation changes in innocuous or comparatively non-virulent germs—a spontaneous culture modification. The virulency of the resulting germ production is modified by many conditions, of which the following are most important: 1. Much depends upon the stage of decomposition of the vaginal fluids. The age of the process of germ development is all important. 2. The frequency of coitus. 3. The constitution and habits of the woman. 4. The character of any seminal or other discharge from the male which may be deposited in the vagina. 5. The degree of uncleanliness of the woman.

Once elaborated and hetero-inoculated upon susceptible soil the results depend upon: 1. The amount and degree of virulence of the infectious germs and their products deposited upon an atrium of infection. 2. The cleanliness, local and constitutional condition, habits and sexual hygiene of the new host. 3. Individual predisposition. This involves individual immunity on the one hand and a tendency to inflammation, suppuration, serpiginous ulceration, phagedena, or gangrene on the other.

It would be beyond the scope of this lecture to reiterate all the points brought out in my earlier papers anent the clinical evidences in favor of the views therein expounded. I will therefore content myself by mention-

ing a few points that are familiar to all of you, with certain qualifications which I believe to be consistent with the views expressed in this paper.

1. The discharge from urethritis—the virulent form especially—if confined by a tight prepuce causes varying grades of inflammation and infection from slight balano-posthitis to destructive ulceration, and even suppurative bubo. The pus from both the sub-preputial process and the resulting bubo may be auto-inoculable, producing ulcers which, if not identical with—and the microscope does not as yet help us here—are clinically similar to chancroid. This is especially true if auto- or hetero-inoculated upon cachectic subjects.

2. The long-continued contact of these sub-preputial secretions causes papillary over-growths—venereal warts and indurating edemas. The discharges of pregnancy, syphilitic lesions, gonorrhea and chancroid produce similar results.

3. Chancroid of the urethra is attended by urethritis of greater or less severity, not typically gonococcal always, it is true, but often so, and then attributed to double infection.

4. Gonorrhea and chancroid are often associated in the same patient under circumstances which are suggestive of the contraction of the one disease from the secretions of the other.

5. Gonorrhea and chancroid are contracted most often from the same class of women—often from the same woman. The higher class prostitute very rarely infects with chancroid and exceptionally imparts gonorrhea.

Women who have infected numerous men with gonorrhea and chancroid, singly or combined, are often found upon examination to have neither disease, so far as our present means of research enable us to determine. They are usually unclean, however. Such women are often merely media for infection, it is true, but this can hardly explain all cases. Latent infection explains some, but it is questionable if it explains everything save mediate infection.

7. Suppurative adenitis is common to all genital lesions, be they specific or simple. That the everyday explanation of this fact is mixed infection I am well aware.

8. It is often a very difficult matter to determine where simple genital ulcer ends and chancroid begins. The test of auto-inoculation is hardly fair, as it is a test merely of the degree of virulency of the secretion. Auto-inoculation does not succeed in the later stages of chancroid, and the results in any given case vary in virulence.

9. The natural tendency of chancroid is to lose its specificity after a time and assume the character of simple ulcer. Boeck's fatuous method of so-called syphilization demonstrated this point beautifully. A similar and more marked evolution and involution should occur spontaneously under natural conditions. I maintain that this spontaneous change in chancroid proves the position I have assumed regarding the evolution of the disease. The involution of the disease necessarily represents an antecedent evolution. If this be not true then the entire scheme of evolution falls to the ground. If evolutionary adaptation did not control infection, the comparatively benign infections would be malignant and fatal. The difference between benign and malignant germ infection simply is in great measure that mutual adaptation is a success in the case of the germ and cell in the one instance and a failure in the other.

There are many puzzling clinical facts bearing upon gonorrhea, which should inspire us with caution in diagnosis. In a number of instances in which patients have been said to have deep-seated gonorrhea with gonococcal semen, I have been able to prove the non-specificity of the apparently typic gonococcus by culture and inoculation. In one case the gonococcus had been found in the semen by no less than seven competent men. The explanation in this case is a purely evolutionary one. The gonococcus had been shorn by adaptation of all its pathogenic properties, whilst retaining its physical characteristics. The final product, however, might, if deposited on suitable—i. e., filthy—soil, again evolve into a specifically pathogenic microbe.

It is noteworthy that a man with latent gonorrhea may infect his wife with typic pelvic infection. Intercourse being renewed later, the wife imparts to the husbandd a typic, virulent gonococcic urethritis. Here is a very striking illustration of germ adaptation. Another pertinent fact is that women with latent gonorrhea, or recently infected by active gonococci, may have no symptoms until the onset of the menstrual period. Coincidentally with the change in soil due to congestion of the sexual tract, acute infection occurs. This is an important germ evolutionary evidence.

A thorough and radical change in scientific thought and research method must occur before such views as I have expressed in this paper can be established on a sound basis, and, so long as our present cut-and-dried methods of laboratory research prevail, not one step will be taken in the right direction. The "circle" of Koch was a vicious circle indeed. No student's examination has been complete without a knowledge of it, yet I venture to assert that it has done almost as much to retard true scientific research as it has to further it. Its range of application has been so narrow as to emasculate it, yet has it dominated pathologic research. Its several test points have failed in numerous kinds of indubitably specific disease. It has been found that the old view of special susceptibility to disease and of a *locus minoris resistentiæ*—which we had all but thrown in the waste basket—must needs be revamped for modern etiologic necessities. As already outlined, it has been found that not all so-called specific microbes are susceptible of pure culture. Some germs have been shown to be inactive pathogenically save when mixed with other germs. Germs which are ordinarily innocuous have been found to become pathogenic under certain special conditions. Most disease germs are effective through the poisons they create, and not of themselves.

I reiterate these points merely to emphasize the fact that the germ is not only not all, but is a small part of what we must learn of etiology and pathology. In conclusion, I will state it as my belief that the etiology and pathology of infectious diseases of the future will stand, not upon the germ but upon the myriad of conditions yet unknown that lie behind the germ. The germ bears the same relation to the true etiology of disease that the cosmogony of Moses does to the universe. It crudely attempts to explain but a small part of a great whole.

Reliance Building.

Clinical Reports.

ACUTE CHOREA, RECOVERY.

CHARLES S. WALKER, M.D.
CONCORD, N. H.

F. O. B., male, aged 31, single, with no particular occupation, but having worked in a wood planing-mill in Massachusetts, entered the New Hampshire State Hospital, Concord, N. H.,

Oct. 9, 1901. He had not been well for four weeks. In the history of the case it was intimated that he had been a little odd since childhood—not quite as adept a scholar as some of his chums. His family medical attendant said the only severe illness that the patient had ever had was enteric fever, 15 years ago, from which he made a perfect recovery.

Physical examination showed height, 5 ft. 6¾ in.; weight 122 pounds; poorly nourished; pulse 68; tongue slightly coated; complexion pale; pupils somewhat dilated, but equally, reflexes normal. There was a peculiar dragging to left leg on walking, which was said to be congenital. It is said that his mother, while pregnant, was frightened by a man who had just such a gait. The reflexes of skin and abdomen were absent; cremasteric, delayed but present; tendon, right, exaggerated; knee-jerk, left, absent; wrist and biceps, absent. Bodily symmetry was fairly good, lungs normal, heart somewhat enlarged, murmur heard at the apex—mitral regurgitant—clearly heard at angle of scapula on left side of back, and the abdominal organs were in normal condition.

Psychic Condition.—There is no history of nervous disorder, insanity or tuberculosis in the family. The patient's habits have always been good, and his conduct well behaved; in temperament he is slightly nervous, and somewhat agitated, and his expression is anxious. Attention and memory were good, both in regard to past and present affairs. His ideas were somewhat retarded, but not to a noticeable extent. He had no delusions, hallucinations or illusions. Before his admission he was at home for a short time and was troublesome. His parents were afraid of him as they had never seen him in this condition. He was ransacking around the house generally, overturning chairs, tables and other articles of furniture, so it was deemed expedient to send him here.

On admission the patient was placed in bed. He was very nervous, moving and twisting around continually, looking first in one direction, then in another. Says he feels perfectly well, but is unable to keep quiet. When eating, crumbles up his food and amuses himself by making a line of crumbs around the edge of his bedspread. Sleeps fairly well. There is a good deal of involuntary muscular twitching, seen perhaps more clearly in the left hand than elsewhere.

October 22.—The patient continues to be very nervous, going through all kinds of antics or choreiform movements with his hands and feet, first lying down and then suddenly sitting up, then lying down will go to sleep for a time. These movements are more definitely manifested in the left hand, although the right is involved. When awake he can not control these movements, the fingers being continually in a state of agitation. After lying in bed for a few days he was allowed to dress and sit up, but being restless was returned to bed. When lying perfectly quiet the muscular twitchings were plainly visible over different parts of the body. He has been eating very well. While taking his food he does considerable juggling with his knife, fork and dishes, and makes all sorts of grimaces. He shows a little improvement.

November 4.—The patient is now able to lie perfectly quiet and manifests no choreiform movements except occasionally when a little excited. A few days ago it was impossible to keep his bed made up. He now keeps the same in splendid order.

November 8.—The fingers can be controlled perfectly—no movements over any part of the body. He is looking fine physically, is gaining fast, and has shown wonderful improvement.

December 10.—He was allowed to attend the dances, but the excitement and music were more than his nervous condition would admit, so he desisted from this pleasure. He has taken outdoor exercise and enjoys it very much.

Conclusion.—The patient made a splendid recovery after an illness of 12 weeks.

Treatment.—After admission a tonic was prescribed—nucis vomicæ, m. 10; tinct. gentian co. 3i, t. i. d.—which was administered for a few days. On October 22 this was discontinued and Fowler's solution was given with 5 drops as the initial dose t. i. d.; this was increased by one drop daily until the dose was 15 drops t. i. d. There were no symptoms of arsenical poisoning. From this point, a decrease was made until 10 drops were reached. Then the solution was discontinued. No other medicinal agents were used except an occasional laxative to keep the bowels in good order.

The food was plain and nutritious, a goodly amount of milk being taken, but very little meat eaten. Eggs in the form of eggnog were freely administered. After convalescence was established, liberal quantities of good New Hampshire air was indulged in.

The rapid recovery of this case shows that Fowler's solution, judiciously used, with rest, quiet and a light nutritious diet, is an excellent treatment in cases of acute chorea.

TWO CASES OF PERIPHERAL GANGRENE ASSOCIATED WITH LOCALIZED DISEASE OF THE ARTERIES.

HARRY M. SHERMAN, A.M., M.D.
AND
THOMAS W. HUNTINGTON, M.D.
PROFESSORS OF SURGERY IN THE UNIVERSITY OF CALIFORNIA.
SAN FRANCISCO, CAL.

HISTORY OF CASE ONE.

CASE 1.—By Dr. Sherman. The patient is a man aged about 40. He has had no serious illness since childhood, when he had an attack of scarlatina, following which he was unable to walk for four months. He has not had syphilis. He has some dry eczema upon his forehead and about the joints. He eats well. His bowel and bladder functions are normal and he sleeps well. He has no sugar nor albumin in his urine.

He gives a long account of the conditions which led to the removal of his left leg. About 1878, when it was the fashion to wear low shoes with large buckles, he had a severe pain at the top of the left instep and so discarded his buckle shoes. For some time he was then free from pain, but after awhile it returned with greater severity; it was thought to be rheumatism and for this he was treated. For seven years he had this pain, with intermissions; but the intermissions became shorter and fewer and the pain, when present, became more severe. Apart from this pain his health was good.

In October, 1896, he was suffering greatly and at that time he thought he had an ingrowing big toenail. He was treated by a chiropodist, and the result was a wound which would not heal, but became septic and finally necessitated the amputation of the big toe. The stump, however, did not heal and the local and general septic condition became worse. An incision was made on the dorsum of the foot; this partly controlled matters, in that the general symptoms subsided, but the local condition continued and he lost all the other toes, except his little toe. There was a pause here, but not for long. In April, 1897, an ulcer appeared upon the instep; this ulcer would not heal and it was decided to curette it. This little operation disclosed such fragile bone and this condition was found to be so extensive, that an amputation was done five inches above the ankle. This stump also did badly and two months after the amputation quite a sequestrum was discharged, and later, when the soft tissues contracted, the bone protruded and another amputation became necessary, four more inches of the leg being removed. This stump followed the course of the others; an ulcer persisted which would not heal under any treatment until hot-air baths were tried; under them it nearly closed so that an artificial leg could be worn.

The patient then went to Nome. His stump became worse and his right foot began to pain him, there being a sensation of intense cold in the sole. This was persistent and irremediable and he returned to California. Here he began the hot-air baths for his stump and the ulcer fully healed; but the right foot became worse, pain being complained of in the sole and instep. For these pains an insole was put in the shoe to support the instep, but without relief. At this time he got a small corn on the little toe and treated it himself. This

resulted in an ulcer, for which Dr. Lewitt was called in; he instituted treatment to secure its healing, but it would not heal. At this time I saw him and agreed in the removal of the distal phalanx; this made matters worse, pus burrowed into the sole, red swollen areas developed in the dorsum and there was danger that the local sepsis would become more and more extensive. Dr. Lewitt transferred the case to me, the patient went to St. Luke's Hospital and under anesthesia both the sole and dorsum of the foot were laid open. The incision through the sole disclosed only a suppurating tract. That through the dorsum exposed dark congested areolar tissue, which looked as if it were ecchymotic, though there was no effused blood. This operation had exactly the same result as all the others. Matters were made distinctly worse and the edges of the incision became gangrenous. I amputated the leg at the junction of the upper and middle thirds. At the request of the artificial leg manufacturer, I made antero-posterior flaps, and these were made very long to permit of a possible marginal gangrene and its separation, and leaving still enough flap tissue to cover the bone. The flaps bled properly, but it was noticeable that no hemorrhage came from the anterior tibial artery. In general, the tissues of the stump looked darker than they should and the blood from them was also darker than normal. The stump was closed by tiers of sutures, uniting individual tissues, periosteum to periosteum, muscle to muscle, and so on, with, finally, a subcuticular suture in the skin. A small gauze wick was placed in the middle, reaching to the periosteal suture. The gauze was removed after 48 hours and the stump looked well. At a second dressing, 48 hours after the first, an area of redness was evident, triangular in shape, its base corresponding to the edge of the middle of the anterior flap and its vertical height being about 3 cm.; at the subsequent dressing, two or three days later, it had disappeared. From that time, healing proceeded uneventfully but slowly, though quite a crease formed in the anterior flap in the site of the reddened triangle. About ten days later this crease unfolded, the place became prominent, dark and fluctuant. With this was some pain. A puncture released some bloody serum. The swelling disappeared, the normal color of the skin returned and the little wound is apparently satisfactorily healed.

Six months later: There has been a further destructive process in the stump at the site of the red triangle, and the artificial leg, which had been fitted, has had to be put aside. This is in keeping with the report of Dr. Taylor, which shows that the disease in the arteries extends above the level of the amputation.

HISTORY OF CASE 2.

CASE 2.—By Dr. Huntington. The patient is a man of 32, a worker in leather. His family history was negative. He presents no history of syphilis or alcoholism. There is a history of an indefinite trouble in his right instep 15 years ago; the instep was painful and tender to the touch. The surface was cold and perspiration was excessive. He states that ever since that time he has suffered from cold feet.

On Jan. 4, 1901, he was admitted to the French Hospital, complaining of severe pain in the right great toe. Upon admission, the attending surgeon found a small, black area upon the outer side of the toe. The nail was removed. Three days later, he entered the City and County Hospital: upon his admission the entire toe was found to be gangrenous and was removed by disarticulation at the metatarsophalangeal joint. Two days later the dorsum of the foot became gangrenous. The gangrene slowly spread. It was of the moist variety and though very indolent there was no attempt to form a line of demarcation. The general condition of the patient was bad.

Three weeks later he was removed to the Mt. Zion Hospital, at which time the leg was amputated in the middle third. A small portion of the anterior flap sloughed, but ultimately the patient made an excellent recovery. A few weeks later a small ulcer appeared in the scar, on the inner side of the stump. This ulcer has never healed and prevents the use of an artificial limb. The stump is cold, perspires freely and is poorly nourished.

At this date, the process appears to be beginning in the left foot and leg. The leg is cold, there are upon the foot discolored areas which are sensitive to pressure. The muscles of the leg are flabby and the leg tires easily.

PATHOLOGY OF THE CASES.

The two legs amputated were examined by Dr. A. E. Taylor. Since no alterations, apart from the areas of gangrene, were found in the muscles or nerves, the vessels alone will be described.

On receipt of the specimens, dissections of the anterior and posterior vessels were done. It was noted, particularly for the anterior vessels, that they were surrounded by an abnormal amount of connective tissue, which was very dense and quite unlike the normal areolar tissue usually found about the vessels. The vessels were then measured and fixed. Thrombosis was noted in both anterior tibial vessels, in both anterior veins and their subdivisions and in the posterior veins in the case of Dr. Huntington.

The measurements of the arteries in the middle thirds were confirmed by measurements in sections with the object-mikrometer of Zeiss. Since the measurements for the total width of the vessels agreed in general with the measurements made of the fresh vessels, it is assumed that the internal measurements likewise were the same. The measurements given are therefore the microscopic measurements.

	Total Diameter. Mm.	Each Wall. Mm.	Lumen. Mm.	Area of Lumen. Sq. mm.
Normal tibial, ant.	3 to 4			
" " post.	3.5 to 5	0.3 to 0.5	2.5 to 4	Above 4.9
Case 1.—T. Ant	1.31	0.305	0.7	0.41
Case 1.—T. Ant., lower 3d.	1.09	0.275	0.54	0.23
Case 1.—Ant. T	0.635	0.2	0.235	0.04
Case 1.—T. Post.	1.35	0.38	0.6	0.28
Case 2.—T. Post.	2.06	0.725	0.61	0.28

As compared to the normal, these arteries display a great reduction in the total diameter and a normal thickness of the wall with a great reduction in the diameter of the lumen. Normal arteries of the same total diameter as these would have much thinner walls, so that these walls, though apparently normal, are really increased in thickness. The functional result is best illustrated by the figures for the areas of the lumens: in no case is the square area in a diseased vessel as much as one-tenth the normal area, while in the anterior tibial vessel in the case of Huntington it is but one one-hundredth. Whether these reductions in the general lumen and diameter occurred before or after the thrombosis can not be said; the posterior tibial in Sherman's case, which was patulous, presented the same marked reductions and this suggests that the reductions antedated the thrombosis.

On microscopic section of the vessels, the elastic tissue and the muscular coat seem qualitatively normal. In particular the normal appearance of the media is in marked contrast to the conditions in arteriosclerosis. Both the muscularis and the elastic tissue seemed rather in excess quantitatively. The intima was not notably thickened in either case, except in the areas of thrombosis, where the intima was involved in the process of obliterative fibrosis. No signs of lime salts could be found. The endothelial cells lining the vessels were normal in the patulous portions. The adventitia was thickened, but was usually well outlined from the surrounding excessive fibrous tissue. In the areas of thrombosis the process is an obliterative arteritis.

The portions of the vessels not submitted to microscopic section were dissected. The process of thrombosis did not extend along the entire length of the vessels involved, except in the case of the anterior artery in the case of Huntington; there were small portions in which the lumen was patulous. These portions were carefully examined with a hand-glass for areas of atheroma. None were found. The vessels were not at all tortuous, but perfectly smooth and straight.

The veins presented no other lesions than thrombosis. These veins vary much in thickness normally, and were not thicker than they often are in individuals in middle or advanced life.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, MAY 24, 1902.

PROFESSOR VON LEYDEN.

Professor Ernest von Leyden of Berlin celebrated his 70th birthday on April 20 last. The occasion was taken as a suitable opportunity for felicitation by medical men all over the world. Professor von Leyden is one of the greatest of living practical clinicians and his contributions to internal medicine represent some of the most significant practical advances of the last thirty years. In many lines of medical practice his work and that of his clinic, from the time when he presided over the department of internal medicine at the small university of Koenigsberg nearly forty years ago, to his more than a quarter of a century at the Charité in Berlin, has been thoroughly representative of what is best in the progress of applied medicine and has proven a fruitful source of suggestion and inspiration to clinicians the world over. The Festschrift for his birthday, dedicated to Professor von Leyden by his many medical friends and pupils, has just reached this country. The two volumes constitute a very appropriate tribute to a great practitioner. Nearly every prominent authority in internal medicine on the Continent is represented by a contribution in the first volume. Articles from Professor von Leyden's pupils make up the second. These include such well-known men as Professor Salkowski of Berlin, Professor Eichhorst of Zurich, Professor Jaffe of Koenigsberg, and such successful investigators as Professors Brieger, Goldscheider, Bernhardt and Klemperer of Berlin. The table of contents of the volumes gives the best possible idea of the amplitude of von Leyden's influence.

As is very proper, most of the contributions to these volumes are clinical in character. Professor Gerhardt and Senator von Leyden's distinguished colleagues at the Charité have each a suggestive article. Professor Gerhardt calls attention to the frequency with which vascular nevi are associated with local hypertrophy of the part affected. He suggests a certain relationship between these anomalies and erythromelalgia and seems to hint that modification in the disfigurement that is so prominent a feature of nevi may be brought about by section of the nerve carrying the vasomotor fibers to the part. Professor Senator discusses, illuminatively, the significance of the so-called "perisystolic," or "prediastolic" heart murmur. The distinguished head of the clinic at Vienna, Professor Nothnagel, contributes a sketch of the career of his life-long friend and colleague, Professor von Leyden, whose assistant he was for many years. Professor von Schrötter of Vienna writes on actinomycosis of the lungs and heart.

Professor von Leyden's colleagues in Berlin are especially well represented. Professor Heubner reviews the clinical work of his department for the last eight years and says a last word on the vexed question of the connection between rheumatism and chorea. For him they are undoubtedly equivalents and nosologically related in their causes. Professor Jolly discusses head tetanus and facialis paralysis. Professor Ehrlich, so long of Berlin, now of Frankfort, has a most suggestive paper on the relations between chemical constitution, molecular arrangement and pharmacologic action. Professor Lazarus discusses the relations between adenoid vegetations and heart dilatation with weak action. Professor Wassermann reviews the important results of recent investigation on the effects of hemolysin, cytotoxin and præcipitin.

The French clinicians are well represented: Bouchard and Marie of Paris, Courmont of Lyons, Bourget of Lausanne and Metchnikoff of Paris. The last-named has an article on an unexpectedly up-to-date subject—inflammations of the appendix. He calls attention to the fact that appendicitis is rare in China, but on the increase all over the rest of the world. He lays no little stress on the presence of various animal parasites in the intestine during early life as producing conditions that predispose to the development of inflammation of the appendix. Of the foreign clinicians, the Russians are best represented and this, it may be said, in spite of the fact that Professor von Leyden was summoned to attend the late Czar. Professor von Bechterew writes on the rhythmic tremors and automatic movements of the hysteric. Professor Kernig of present-day notoriety, because of the discussions over the Kernig symptom in meningitis, writes on the use of quinin in the treatment of typhoid fever, for which he has found the remedy of great value. Professor Minor of Moscow writes on hemispasm of the tongue and lips as a late symptom of organic hemiplegia that makes possible its differentiation from functional hemiparesis. Rome and Bucharest, Helsingfors and Budapest, Amsterdam and Copenhagen, London and Athens, all send their offering of reverence for long years of clinical work well done to the master at Berlin. The spirit behind the work is an earnest of that better fellowship among the men of all nations that is so manifest and so promising at the beginning of the twentieth century and that has especially drawn the members of the medical profession together. The fellow-feeling for suffering humanity that makes all physicians kin, will be an inspiration to that coördination of effort that crowns investigation with success. No better example of its helpfulness can be found than in the work of von Leyden, his pupils and his friends.

THE MODERN FAMILY PHYSICIAN IN LARGE CITIES.

The passing of the old-style family physician in our large cities means a distinct loss to society unless he be replaced by another and more modern family medical adviser. The present vogue for treatment by specialists

and for office consultation is a natural outcome of prevailing tendencies in both professional and lay circles. People need not be particularly well-informed nowadays to have little faith in the ability of one individual to cover the whole field of either medicine or surgery. They realize, for instance, that he who thoroughly knows obstetrics probably is not justified in uttering a final word on diseases of the nervous system, or that good surgery for crooked feet is not to be expected of the gynecologist. The consequence is that the several members of one family may have different medical attendants, and perhaps even change from specialist to specialist as their ailments vary. Office practice fosters these tendencies. Altered conditions of living in cities, such as disappearance of the homestead idea in this generation of apartments and flats, and the frequent change of residence from one part of the city to another, among all classes often, except in the case of office consultations, means calling in a new physician.

Great disadvantages are apparent in these tendencies, though considerable allowance be made for the value of consulting directly with specialists. Many conditions of home life are elusive in a scientific office examination, which as truly make for pathologic conditions as any state of body function discoverable by laboratory methods. Novelists are fond of portraying the ease of the young woman who with her ailments born of some love affair quite baffles the doctor's diagnostic skill. Henry James, a careful student of human affairs, although perhaps hardly a realist, makes a young maiden in one of his stories rapidly succumb from an amatory *faux pas*—leaving her physicians shaking their heads and pronouncing it a very curious case. As a matter of fact, in everyday life the family confidant, such as the family physician should be, is the only person to fairly understand many ailments which have for their base defective social surroundings or mental conditions.

An important rôle for the family physician wherein he can fulfill a great social need is in the practice of preventive medicine. Hygiene of the individual and of the household are of vital importance from every point of view, and no one can know the factors and solve the problems so well as a tactful and trusted family physician. The writer has seen an instance of a young child treated at an office regularly all one winter for a skin affection by a physician of experience who neither found a cause nor effected a cure. The matter being carefully studied into by a physician who saw the family at home, the cause was discovered to be exposure to the direct heat of the kitchen range during the morning bath. This proceeding stopped, the dermatitis quickly healed without treatment. Such unconscious and apparently trivial slips in hygiene are discoverable only by the family physician who has the advantage of intimate acquaintance with life in the home.

Much benefit accrues to the family having a trusted physician in the greater incentive to go to him with small ailments. If these only occasionally turn out to be important, yet one occasion may justify by the results of early treatment the reporting of a great many inconsiderable ills. No better illustration of this is to be found than in the demand which gynecologists are recently making upon the family physician for early diagnosis of uterine carcinoma by the very symptoms which women do not think of enough importance to bring to the attention of a specialist.

The modern family physician need not presume to be all-knowing, but he must be especially well-informed in the general matters of surgery and medicine, and well enough equipped with common sense to coöperate with the specialist whenever there is any suggestion of need. Besides training in preventive medicine it will not be too much to demand that he know enough of the physiologic development of the nervous system to give advice about the early education of children, and enough of psychology to do what the occasional consultant can rarely do, namely, recognize and remedy if possible any factor in the patient's mental habits or environment which may be a causative agent in the pathologic condition.

INORGANIC FERMENTS.

By inorganic ferments is understood finely-divided metals (platinum, silver, gold, etc.) suspended in water as solutions. This fine division of the metal is obtained by passing a strong electric current from one bar of metal to another in pure water. It does not concern true solutions, however, because there is no change in the freezing-point, the vapor-tension, or the boiling-point of the fluid; neither does it not produce any osmotic pressure. For these reasons these mixtures are called pseudo-solutions or colloidal solutions; they are analogous to solutions of starch and albumin, but have also remarkable fermentative properties. Thus, a colloidal solution of platinum hastens the oxidation of alcohol into acetic acid; others invert cane sugar, etc. Like organic ferments, small amounts of colloidal solutions of metals effect large transformations without themselves undergoing any change. Such reactions are termed catalytic.

The work here referred to has been carried out by Bredig and his pupils, and it is from the reviews of their work by Harry C. Jones[1] that the facts cited are abstracted. It has been shown, further, that like organic enzymes, colloidal metals are exceedingly sensitive to certain substances, such as hydrocyanic acid, carbon bisulphate, etc., which interfere also with the fermentative action of finely-divided metals. Bredig and his co-workers have made qualitative and quantitative studies of the "poisonous" effect of such substances as those mentioned upon colloid platinum by investigation of its rate of decomposition of hydrogen dioxid after the addition of various poisons, using in all about thirty substances. From the effects of some of these poisons the platinum would

1. Bulletin of the Johns Hopkins Hospital, September, 1900, p. 224, and May, 1902, p. 97.

recover, e. g., hydrocyanic acid and cyanogen iodid, while the detrimental action of other substances, among them iodin, remained permanent. To cite only one actual example—a solution of hydrocyanic acid containing one gram molecular weight in two million liters reduces the reaction velocity of colloidal platinum one-half. The fact that the poisonous action after a time diminishes materially, i. e., the ferments "recover," is regarded as due to the oxidation of the hydrocyanic acid in the solution.

Comparative studies show that there is a general agreement between the action of poisons on organic and inorganic ferments. We can do no better than requote the following paragraphs from Bredig already cited by Jones: "All these facts point to an unmistakable analogy between the contact actions in the inorganic world, and the actions of ferments in the organic world. As in the case of my colloidal catalyzers, we are dealing with reactions in which enormously-developed surfaces are involved, so is it probable that the same condition obtains in the actions of ferments, enzymes, blood corpuscles, and oxidizing and catalyzing organic substances. We see, therefore, that the organism develops its enormous surfaces in the tissues and colloidal ferments not only because it requires osmotic processes, but on account of the very great catalytic activity of such surfaces. If, as Boltzmann says, the war for existence which living matter must wage is a war about free energy, certainly of all forms of free energy the free energy of surface is the most important for the organism." Bredig does not maintain that there is any mysterious identity between enzymes and the metals, but he thinks it is fair to regard the colloidal solutions of metals, in many relations at least, as inorganic models of organic enzymes. The value of Bredig's work for biology and medicine lies in the better understanding it gives us of the nature of ferment action which underlies so many of physiologic and pathologic processes.

THE VALUE OF BLOOD EXAMINATIONS IN THE DIFFERENTIATION OF TYPHOID AND MALARIAL FEVERS.

When typhoid and malarial fevers prevail coincidently, particularly when atypical forms of each occur, the diagnosis in a given case may be attended with the greatest difficulty and a correct decision may be possible only after invoking the aid of all refinements in physical exploration. A positive reaction with the serum agglutinating test on the one hand and the presence of the plasmodia in the blood on the other hand, together with other more or less characteristic symptoms, may leave no room for doubt, but occasionally these phenomena may for one reason or another be absent. It seems not impossible that the different infectious diseases are attended with more or less definite, perhaps specific, changes in the blood and the near future may yield additional diagnostic means of great precision and certainty.

We have already referred to the agglutinating test and the hematozoön of malaria. It is further known that in both typhoid and malarial fever when uncomplicated the number of red and of white blood corpuscles and the percentage of hemoglobin are diminished. Recent observations seem to show that certain differences in these changes afford a means of differentiating typhoid and malarial fevers. In a series of some 50 cases of continued and remittent fevers observed in India among Europeans and natives, Dr. Leonard Rogers[1] found that a fairly close correspondence existed in cases of typhoid fever between the reduction in the number of red blood corpuscles and in the amount of hemoglobin, so that the color-value remained practically unchanged. The degree of anemia was comparatively slight, the depreciation rarely reaching as much as 50 per cent., while the white blood corpuscles seldom fell below 3000 and rarely below 2000 in the cubic millimeter. On the other hand, the degree of anemia was often greater in cases of malarial remittent fever, but the reduction in hemoglobin did not keep pace with that in the number of red corpuscles, so that the color-index was higher. In cases of malarial remittent fever with little or no anemia the reduction in the number of white blood corpuscles differed little from that noted in cases of typhoid fever, but in the presence of marked anemia the number was almost always much lower than is the rule for typhoid fever, counts of 2000 or less being not rare. Notwithstanding the reduction in the number of white blood corpuscles it was found that the proportion of mononuclear leucocytes was increased, the increase affecting the lymphocytes (up to 40 per cent. and more) in the case of typhoid fever and the large mononuclear cells (up to 12 per cent. and more) in the case of malarial fever.

Cells as large as the polymorphonuclear leucocytes or larger were considered in the latter group, while those smaller in size were placed in the former. Myelocytes were more commonly found and in larger number in cases of malaria (from 1 to 5 per cent.) than in those of typhoid fever, in which latter disease, further, the polymorphonuclear leucocytes were the more considerably reduced. Leucocytosis was rare in cases of malarial fever even when complicated, as, for instance, by broncho-pneumonia. The presence of leucocytosis could often be detected in stained preparations from the presence of an excessive number of polymorphonuclear leucocytes. The observations briefly summarized in the foregoing are exceedingly interesting and they may prove to be of great value. It is appreciated that their significance is not infallible or invariable, but, like that of other symptoms, is relative. In a word, the results of blood examinations must be estimated here as elsewhere in connection with the other conditions present.

THE MECHANISM OF THE LARYNGEAL PALSIES COMPLICATING TABES DORSALIS.

Occasionally there occurs in the course of tabes dorsalis paralysis of laryngeal muscles, especially late in the progress of cases attended with symptoms referable to the cerebral nerves. More rarely such a condition

1. British Medical Journal, April 5, 1902, p. 827.

appears as a premonitory manifestation, in advance of the typical symptoms, especially the ataxia. Two cases of this latter character have recently been reported by Dr. A. Cahn.[1] In one of these bilateral paralysis of the dilators of the larynx was observed soon after the development of rheumatoid pains, pupillary immobility and abolition of the knee-jerks. In the second case there were at first laryngeal crises, followed by the symptoms of paralysis of the posterior crico-arytenoids, tabetic arthropathies and pains and finally ataxia. A study of the cases of like character recorded in the literature shows that in the large majority alterations in the peripheral nerves supplying the muscles of the larynx are found exclusively. These changes may consist in isolated degeneration of the muscles or of the intramuscular nerve-elements or in degeneration of the recurrent laryngeal nerve alone or in degeneration of the recurrent laryngeal and of the trunk of the vagus in the neck or up to the medulla oblongata or finally into the medulla, with normal nuclei. Only a few cases with definite nuclear changes are known and in only one case has disease of the nucleus ambiguus been demonstrated. In all of these cases there was found also, whenever looked for, degenerative changes in the peripheral nerves, often more considerable and more important than the nuclear degeneration. The clinical picture in the cases in which changes were present in the peripheral nerves alone or in predominant degree exhibits a median position of the vocal bands. This may persist even when the paralysis and atrophy involve also other internal laryngeal muscles in addition to the posterior crico-arytenoid muscles. On the other hand, in the cases of nuclear atrophy the clinical picture is variable. The vocal band on one or both sides may be in the cadaveric position or in the median position and there may be derangement of sensibility.

1. Deutsches Archiv für klinische Medicin, 73, B., p. 281.

IMPROVEMENTS IN THE TECHNIC OF AGGLUTINATION.

Undoubtedly one of the most potent reasons that certain laboratory methods of great advantage to the physician do not more rapidly find their way into actual practice is the complicated character of some of the manipulations. Every step towards the simplification of such methods is welcome. Take the agglutination reaction in typhoid fever, for instance. Its great diagnostic value is universally acknowledged; it is not a very difficult reaction to carry out; but it requires a fresh, pure culture of typhoid bacilli, and many practitioners no doubt find it burdensome to endeavor to keep such cultures on hand. Of course, cultures are always obtainable from laboratories, but then there is the transplantation from day to day and the maintenance of an incubator at constant temperature. Unless the physician has had real laboratory training and is interested in keeping up a clinical laboratory of his own—and it seems that this is becoming more and more commonly the case, especially among the younger men—he naturally shrinks from adding a number of new details to his already full list of duties. And so it comes to pass that the patient gets well or dies with an indefinite diagnosis, but perhaps the more serious result is that the physician falls behind and gradually slides into loose methods. It has recently been demonstrated that in place of living typhoid cultures of a certain age, formalinized bouillon cultures may be used.[1] The method comes from Ehrlich's laboratory. Bouillon cultures of typhoid bacilli after growing one day at 37° C. are killed by the addition of one part formalin to 100 parts bouillon culture. Their mixture is allowed to stand for 48 hours at 37° C. when the supernatant homogeneous fluid is poured off. This fluid may be used for weeks as one of the factors in the agglutination test. It is best kept in the ice-box and should be well shaken before being used. The test may be made by adding the same quantity of the formalinized bouillon to the same quantity of various dilutions in physiologic salt solution of the serum to be tested, using for this purpose small glass cellars such as are employed in histologic work. Agglutination is characterized by the formation of crumbling, stellate masses easily seen under a low power and weak illumination. It would seem that this use of formalin bouillon would simplify the test considerably, and for that reason it may find favor with the progressive practitioner.

1. Prösecher Centralbl. f. Bakt., 1902, xxxi, 400-403.

CATARRHAL INFLAMMATION OF THE MIDDLE-EAR AS A FACTOR IN THE PRODUCTION OF FACIAL PALSY.

It is probable that the influence of cold as a cause of disease has been greatly overestimated. Unless the reduction in temperature be sufficient to interfere with the vitality of the part or to prevent reaction, it seems more likely that it acts merely as a contributory factor, possibly favoring the activity of pathogenic micro-organisms almost always present. Perhaps also the cold has some influence upon local as well as upon general metabolism, but whatever the explanation, there seems to be no doubt that exposure to cold in some way favors the development of a not inconsiderable number of morbid conditions. Conspicuous among these are inflammations of nerves, and here we have a striking example in facial neuritis, the palsy resulting from which is the most common form of paralysis due to disease of a single nerve and for which cold is held responsible in about three-quarters of the cases. Now, in explanation of the mechanism through which this result is brought about, Dr. H. O. Reik[2] suggests that, in a considerable number of the cases at least, there results an acute or subacute inflammation of the middle ear as an intermediary condition between the exposure to cold and the appearance of the paresis. He reasons that inasmuch as the sheath of the facial nerve is not uncommonly in direct contact with the mucous membrane of the middle ear or separated from it only by a thin lamella of bone, the nerve may suffer in consequence of a catarrhal condition of the ear resulting from exposure to cold, and he suggests that in some if not many cases of facial palsy symptoms of coryza or pharyngitis, followed by pricking or stinging in the ear, with a sense of fulness and tinnitus and deafness, will, if looked for, be observed in advance of the muscular weakness. In support of this view an illustrative instance is reported and reference is made to three others, and significance is attached to

2. Bulletin of the Johns Hopkins Hospital, April, 1902, p. 83.

the rapidity with which often recovery takes place and to the further fact that the most appropriate treatment, namely, leeching, counter-irritation, purgation and iodids, is equally applicable to both conditions. Finally, the recommendation is made that in order to hasten recovery paracentesis of the tympanic cavity should be practiced if examination discloses the presence of an exudate. While facial paralysis is not a dangerous disorder it is disfiguring and undesirable and it should, whenever possible, be prevented or relieved. In a not inconsiderable number of cases it persists for a long time and not rarely it may leave permanent deficiency, so that any means that is calculated to contribute to its prevention and to hasten its disappearance should be most heartily welcomed.

TUBERCULOSIS OF THE STOMACH.

Tuberculosis of the stomach is an exceedingly rare form of tuberculosis as compared with the frequency of tuberculous localization lower down in the intestinal tract. The causes of this relative immunity to tuberculosis on part of the stomach are not altogether clear. Several investigators have shown that the gastric juice does not destroy tubercle bacilli except after prolonged action for twenty-four hours or more. The experiments have not demonstrated, however, that the gastric juice is a favorable medium for the growth of the bacilli and in this fact may lie the explanation of the rarity of tuberculous gastritis and frequency of tuberculous enteritis. Only occasionally is chronic ulcerative tuberculosis of the lungs complicated with gastric tuberculosis and the question naturally arises, what are the special predisposing factors that lead to its development in these exceptional cases? Przewoski[1] after describing five examples of tuberculous gastritis notes that in all the cases it concerned a fibrous form of pulmonary tuberculosis and points out that this prolonged chance for infection may be of decisive importance. In two of the cases there were present the lesions of an old gastric catarrh which may have enacted the rôle of predisposing cause. It will be recalled, however, that catarrhal lesions of the stomach are frequent in chronic pulmonary tuberculosis. And then Przewoski suggests that the number of lymph follicles in the wall of the stomach may be of importance. It is in the lymph follicles that the tuberculous infection of the small intestine begins. The number of lymph follicles in the human stomach is a varying one; at times the follicles may be numerous, especially about the pylorus and in the cardiac region, and tuberculous ulcers develop most frequently in the pyloric portion of the stomach. In case the tuberculous material remained for some time in the stomach there would be greater chance for infection about the pylorus than elsewhere. Hence there are a number of local conditions in the stomach which, coupled with more or less permanent and well-marked alterations in the gastric juice, may give opportunity for the localization of tubercle bacilli, especially when these are supplied constantly for a long time and in considerable numbers. As far as we know now tuberculosis of the stomach can not be said to have any great clinical significance. Still, it is noteworthy that it has been mistaken for carcinoma. Symptoms of gastric cancer in the tuberculous and phthisical should consequently awaken suspicion of tuberculous gastric lesions. At the same time, the gastric symptoms, particularly if mild, may be the result of other pathologic conditions that predispose to tuberculous infection. Tuberculous gastric lesions the result of the introduction of tubercle bacilli with the food do not seem to occur because no cases of this nature have been recorded.

1. Virchow's Archiv, 1902, clxvii, 424-442.

A NATIONAL, NOT A LOCAL EXAMINING BOARD.

We print in this issue a communication relative to the recent proposition for a voluntary national examining board, which seems to us to indicate some misapprehension on the part of the writer. It is not and has not been the idea that this national board should have its exclusive residence in the national capital. It was specially stated that it included examinations at different centers and it is hardly likely that the Middle West or even the more remote regions would be ignored. As to the matter of recognizing already-issued state licenses, we do not see how this can be done. Indeed, it is contrary to the essential idea of the examining board which must be something different from the state boards and entirely independent of them, as regards its work and standards. Indeed, it is expected that its standard will be up to if not above that of any of them, as they have been and are at present, and to have it recognize and endorse qualifications which it has not tested would defeat its object. The idea of the national examining board is to have one qualification, open to all, that shall be equal to that demanded anywhere in this or other countries, that shall be recognized by the general government as an essential for all medical appointments under it, and that can be endorsed by state examining and registration boards as fully meeting all their requirements, except in the matter of fees. It may be that some states may not endorse it at once, but if it is accepted by some it will in time come to be accepted by all and the problem of reciprocity will be solved. To meet all these requirements it is necessary that the standard should be high enough to make it unreasonable for any state board to attempt setting a higher one. Such being the case, there could be no reason for such board to fail to recognize it. The details of the organization and working of a national board are not difficult and suggestions are numerous that will occur to any one. It is well that the subject is brought prominently before the profession so that its discussion may be full and ample prefatory to active measures for its realization. It may not be denied that it will seem somewhat like a hardship to many old practitioners that they can not take, or rather pass, the examination and receive the license. This, however, will be found, we think, less serious in practice than in theory, and in any event no greater hardship is imposed than now exists. No state medical laws need be repealed and state boards of registration can still have the same liberty of action as they now possess. A state examination will still be sought by the majority. But over and above these will be a universal qualification available to anyone who can meet the requirements and which will in time, we believe, come to be the one sought by the ambitious young

graduate. As stated before, the benefit from such a board would be for the future, rather than the immediate present. The creation of this board should not affect the efforts that are being made for reciprocity. There will be just as much need of this to relieve existing conditions.

Medical News.

CALIFORNIA.

Hospital Purchased.—Dr. James M. Shannon has purchased from Mrs. Belden of San Francisco the East Bay Sanatorium property at Oakland.

San Juan Health Board.—San Juan has organized a board of health, with Dr. Frank H. Patterson as secretary and Dr. John Crawford, inspector.

Hospital for Deaf and Dumb Institute.—The new hospital building at the Deaf, Dumb and Blind Institute, Berkeley, is nearly completed. The building has cost $6500. Dr. Oliver D. Hamlin, Oakland, will have charge of the hospital.

Convictions for Illegal Practice.—After two trials in which juries failed to agree, Mrs. Annie D. Howe has been convicted at Oakland of practicing medicine without a license.——Chang Ke Hong paid a fine of $100 in Santa Clara, May 2, for illegal practice of medicine.——F. M. Hoque, San Jose, a vendor and manufacturer of a salve which he claimed would cure cancer, was found guilty of practicing medicine without a license, but recommended to mercy.

A Correction.—The medical department of the University of California has notified us of an inaccuracy in our mention of the combined course in natural science and medicine which has been inaugurated at that institution. Under the new regulations students who have taken the three years' pre-medical course at Berkeley are admitted to regular freshman standing. The new course combines two years of work in sciences with the first two years' work in the medical department. The course consists of the freshman and sophomore years' work in the College of Natural Sciences, devoted largely to physics, chemistry, biology, German, and French. The first two years of the medical course, consisting entirely of instruction in the pure medical sciences, are then elected as the junior and senior years' work in natural sciences, and upon the completion of these four years the student is granted the degree of B.S. Following this the student enters upon the study of the clinical branches of medicine, and after two years receives the degree of M.D. The essential element in the new regulation consists in the election by the student of natural science of anatomy, physiology, pathology and bacteriology as his advanced scientific work, the last two years in the course of natural sciences being elective. The two years' work in the College of Natural Sciences now offered in this course practically corresponds to the collegiate work which, under the new requirements for admission to the medical department, will be made obligatory upon all entering students.

COLORADO.

Denver University Medical Department graduated a class of 10, May 12. Rev. David Utter delivered the address to the class and Chancellor William H. Buchtel made a brief address on the past and future of the school.

Resolutions on Deceased Member.—At a special meeting of the Pueblo County Medical Society, held at Pueblo, May 1, resolutions were adopted recognizing the integrity of the late Dr. Pembroke R. Thombs and expressing regret, sympathy and condolence.

Plague Quarantine Continued.—At the semi-annual meeting of the State Board of Health, held April 14, it was decided to continue the bubonic plague quarantine order, which forbids entrance into the state from any point of any Chinaman who can not produce a certificate of health showing that he has not been exposed to bubonic plague during the six weeks immediately preceding his entrance.

Death and Disease.—The State Board of Health reports 769 deaths for the month of April, a death rate of 16 per 1000 per annum. Of these 20 were due to diphtheria; 17 to scarlet fever and 12 to typhoid fever. During the month 90 cases of diphtheria, 268 of scarlet fever and 29 of typhoid fever were reported. This shows a decrease as compared with March of 46 cases of diphtheria, 52 of scarlet fever and 5 of typhoid fever.

CONNECTICUT.

Tuberculosis Hospital Opened.—The new hospital for tuberculous patients erected on Cedar Mountain at a cost of $47,000, was opened for the inspection of the public, May 1. In the morning the physicians of the city, donors to the hospital fund and city officials were present and in the afternoon the general public were admitted.

Infectious Diseases Reported.—The report of the State Board of Health for April shows that during the month, infectious diseases as follows were reported: Measles, 127 cases in 26 towns; scarlet fever 338 cases in 54 towns; cerebrospinal fever, 1 case; diphtheria, 113 cases in 35 towns; pertussis, 68 cases in 11 towns; typhoid fever, 37 cases in 16 towns, and consumption 18 cases in 11 towns.

April Mortality.—There were 1191 deaths in the state during the month of April. This was 48 less than in March and 62 less than in April of 1901, and 111 less than the average number of deaths in April for the five years preceding. The death rate was 16.1 for the large towns, for the small towns 14.7, and for the whole state 15.7. The deaths reported from infectious diseases were 252, being 21.1 per cent. of the total mortality.

Interneships for Yale Men.—The following men, after their graduation in June, will take positions on the house staffs of hospitals as follows: E. S. Brackett to the General Hospital, Providence, R. I.; H. E. Adams to the City Hospital, Hartford; J. J. Dunleavy and E. C. Krause to St. Mark's Hospital, New York City; V. A. Kowalevski to the Bridgeport Hospital; A. C. Swenson and L. F. Turner to the New Haven General Hospital.

ILLINOIS.

Dr. Fisher's Will Probated.—The will of the late Dr. Fisher of Le Roy was admitted to probate, May 8. The estate is valued at about $50,000.

New Hospital at Macomb.—The new Catholic Hospital to be erected at Macomb, will accommodate from 40 to 60 patients, and is expected to cost $25,000.

Instruments for St. Mary's Hospital.—The Illinois Zinc Company has presented St. Mary's Hospital, La Salle, with an operating-room equipment at a cost of $2000.

Gift to Hospital.—Jacob Zorger of Clinton has announced that he will give $5000 toward the building fund of a hospital in that city and $5000 toward its endowment.

Presentation to Dr. Smith.—The physicians of Bloomington, on the occasion of the seventieth birthday of Dr. Lee Smith, presented him with a handsome oak rocking chair.

Dr. S. T. Glasford, Pekin, who we announced last week had located in St. Louis, writes to say that he is in St. Louis only for some special work and will return to Pekin later.

Chicago.

Personal.—Dr. James V. Chvatal has been appointed a member of the Board of Education.——Dr. William Allen Pusey has moved his office from 103 State Street to 65 Randolph Street.——Dr. Fred Drury Hollenbeck has moved to 183 Rush Street.——Dr. John C. Bryan has been elected president of the Menoken Club.

Landlords Must Heat Flats.—Landlords of flat buildings have been forced to furnish heat to tenants during the recent cold spell, notwithstanding that leases read that heat is furnished only from September to May. The Department of Health has received many complaints and has issued orders which have been obeyed.

College of Physicians and Surgeons.—The medical department of the University of Illinois held its twentieth annual commencement in Chicago May 20. Dr. Walter S. Christopher delivered the doctorate address; Prof. T. J. Burrill, Ph.D., LL.D., acting president of the university, conferred degrees and announced honors, and Dr. Sherman M. Kyes, valedictorian, responded for the class, which numbered 222.

Raw-Water Disease.—Too much untreated hydrant water is still being drunk, notwithstanding the daily bulletins of the department showing the quality of the lake water. The frequent rains of the last few weeks have produced the usual pollution, and 11 deaths from typhoid fever were reported during the week. Deducting 2 of these, which were contracted elsewhere, the remaining 9 typhoid deaths are a wholly unnecessary sacrifice to ignorance or criminal negligence. All hydrant water intended for drinking purposes should be boiled.

Influenza and Suicide.—During the first 17 days of the month there have been 30 suicides—a tribute to the evil influence of the influenza poison upon the nervous system. Alienists

especially and the medical profession generally are at last aroused to the baneful import of this disease, which has been more or less prevalent throughout the world since the fall of 1889. The large increase in the demand for bacterial examinations in the laboratory during the past fortnight was due entirely to influenza, the bacillus of which is found with increasing frequency.

New Hospital Rules.—Warden Healy of the County Hospital has adopted a rule prohibiting patients from other hospitals from entering the County Hospital. When a patient operated upon at a private hospital is sent to the County Hospital and dies there, the impression is given out, according to the County Hospital officials, that the patient died because of the care he received at the County Hospital. By another recent ruling the following patients will not be taken to the clinic: Any patient who would suffer in any way discomfort or actual injury; any patient who is in danger of sudden death and any patient who would be discouraged or displeased because of going to the clinic.

The City's Mortality.—There were seventy-eight fewer deaths in the week ended May 17 than in the week before, and the total, 471, or an annual death-rate of 13.48 per 1000, is the lowest in twenty-one weeks. The reduction represents a decrease of 13.2 per cent. in the annual death rate. The principal reduction has been in the age period under five years, a reduction which has been continuous for the last three weeks. Coincident with this has been a steadily improving quality of the milk supply. Of the total 574 samples of milk and cream examined last week in the laboratory only 24 or 4.1 per cent. were found below grade. This establishes a new record in the milk division.

INDIANA.

Dr. Eastman No Better.—We regret to announce that Dr. Joseph Eastman is reported to be gradually getting worse, and little hopes are entertained for his recovery.

MARYLAND.

Free Antitoxin.—The authorities of Baltimore County will furnish antitoxin to the poor without cost.

Railway Hospital at Brunswick.—A small hospital has been established at Brunswick, Md., for the treatment of injured resident railway employes.

Hospital Site Selected.—A lot has been selected for the Cambridge, Dorchester County, Hospital, 240 by 420 feet, and costing $2500. It is situated in the residence section of West Cambridge. The last legislature appropriated $10,000 for the institution.

Personal.—Dr. Charles W. Wainwright of Princess Anne, Somerset County, has been appointed by the Governor a member of the Lunacy Commission.——The Baltimore County Sanitary Board organized at Towson, with Dr. J. F. H. Gorsuch as president, and Dr. T. Ross Payne as secretary.——Dr. E. E. Stonestreet, Rockville, has been elected health officer of Montgomery County.

Vaccinators and Sub-Registers Appointed.—The following physicians have been appointed vaccine physicians and subregisters of Anne Arundel County for the next year: Drs. Guy Latimer, Benjamin R. Davidson, William G. Williams, George Crane, John M. Hayes, J. W. Dubois, C. P. Carrico, J. B. Robinson, C. R. Winterson, T. B. Horton, W. Clement Claude, Frank H. Thompson, Geo. T. Dent and G. Hall Perrie.

Baltimore.

Professor Welch to Deliver the Huxley Lectures.—Dr. William H. Welch has been chosen to deliver the Huxley lectures this year.

Fire in Kelly Sanatorium.—A fire broke out in the cellar of Dr. Howard A. Kelly's Sanatorium, May 14, but was extinguished before much damage was done.

Eye, Ear and Throat Hospital Report.—The annual report of the South Baltimore Eye, Ear and Throat Charity Hospital and Dispensary, which was opened May 1, 1901, shows 433 cases treated, 2061 visits to the dispensary and 82 surgical operations performed.

Personal.—Dr. John Montgomery West, a graduate of the Johns Hopkins Medical School, 1901, sailed, May 13, for Europe, where he will spend a year and a half in German hospitals.——Dr. Morris C. Robins has been appointed medical assistant to the State Board of Health at a salary of $1000. This office was created by the last legislature.——Drs. Stephen H. and John H. King sailed for Europe May 21.——Dr. Wm. H. Gaddess, who has been the resident physician at the Hebrew Hospital for the last two years, has resigned and will engage in private practice.

New Clinical Building for Johns Hopkins Medical School.—The present amphitheater will be torn down and a new building erected in its site to cost more than $100,000. It will be 100 by 112 feet, a five-story-and-basement brick building, harmonizing with the other hospital buildings. On the basement floor there will be accident rooms, dispensary, waiting and operating rooms. The first floor will have Dr. Osler's dispensary and rooms for accident patients, also a large lecture hall, examining and class rooms, etc. On the second floor there will be rooms for patients from the hospital and vaults for records. The third floor will be devoted entirely to teaching by Dr. William S. Halstead, and will contain pathologic, bacteriologic and clinical laboratories, museum,, examining room and a large lecture hall which will seat 200 students. The fourth floor will be devoted solely to surgery. There will be an anesthetizing room, preparatory room, operating room, sterilizing room, operating amphitheater, chief surgeon's office, recovery room, waiting rooms, etc. The top floor will be used for photography, and will be well lighted by a large skylight. The building throughout will be finished and equipped in a thoroughly modern way.

MASSACHUSETTS.

Hospital Bequests.—By the will of the late William Skinner of Holyoke, $10,000 is devised to the Holyoke City Hospital and $5000 to the House of Providence Hospital in the same city.——The will of Benjamin Henry provides that on the death of Mrs. John C. Howard, Los Angeles, Cal., the sum of $4000 shall be paid to the Franklin County Hospital, Greenfield.

Millions for Hospital.—The Peter Bent Brigham Hospital Corporation was formed May 8, under the will of Peter Bent Brigham, who died twenty-five years ago, leaving his estate in trust for hospital purposes. This trust expires on May 25, making $4,000,000 or more available for a new hospital in Boston. Brigham for a generation kept a concert hall in Court Street.

Personal.—Dr. George P. Hunt, Carney Hospital, Boston, has opened an office in Pittsfield.——Dr. Charles C. Holcombe, Lee, has resigned as medical examiner for the Fourth Berkshire district.——Dr. Charles F. Branch, Amherst, has been appointed medical examiner, vice Dr. Herbert B. Perry, removed.——Dr. John S. Hitchcock, Northampton, has been elected a member of the local health board.——Dr. Thomas Howell, assistant superintendent of Worcester Insane Asylum, has been elected superintendent of the Worcester City Hospital, vice Dr. Charles A. Peabody.

Laboratory Positions Open.—Prof. W. T. Porter has announced that three of the places recently offered by the Harvard Medical School to properly qualified men desirous of training in physiologic research and in the management of large laboratory classes in experimental physiology are not yet filled for the next collegiate year. Excellent opportunities are afforded to the holders of these places, and, besides the valuable amount of scientific knowledge that may be acquired by association with the large staff engaged in research, $400 is paid annually to each assistant. Applications should be sent to Professor Porter at the medical school, No. 688 Boylston Street, Boston.

MICHIGAN.

Detroit College of Medicine graduated a class of 48, May 8. Dr. Theodore A. McGraw conferred the degrees; Dr. Don M. Campbell delivered the faculty address, and Dr. William T. Power was valedictorian. Rev. Nehemiah Boynton delivered the address of the evening on "Professionalism in Life." A banquet followed, at which Dr. J. Henry Carstens officiated as toastmaster.

Mortality in Michigan.—According to returns to the Department of State, there were 2850 deaths in Michigan during the month of April, a decrease of 109 from the preceding month. The death-rate, however, 14.1 per 1000 estimated population, was the same as that for March. There were 492 deaths of infants under 1 year of age, 219 deaths of children aged 1 to 4 years, inclusive, and 865 deaths of persons aged 65 years and over. Important causes of deaths were as follows: Pulmonary tuberculosis, 206; other forms of tuberculosis, 37; typhoid fever, 37; diphtheria and croup, 31; scarlet fever, 30; measles, 35; whooping cough, 25; pneumonia, 354; influenza, 45; cancer, 134; accidents and violence, 153.

Butterworth Hospital Staff.—The board of trustees of Butterworth Hospital, Grand Rapids, has chosen the following

staff: Dr. George K. Johnson, chief of staff; visiting physicians, Drs. John B. Hilliker, Henry Hulst, John A. McColl, Clarence H. White, Ralph H. Spencer, Joseph Albright, William F. Hake, Elizabeth Earle, and Herbert M. King; consulting physicians, Drs. George K. Johnson and Eugene Boise; visiting surgeons, Drs. Perry Schurtz, Hugo Lupinski, J. Orton Edie, Collins H. Johnston, Charles E. Hooker, Richard R. Smith and William G. Young; consulting surgeons, Drs. George K. Johnson, and Samuel R. Wooster; eye, ear, nose and throat, Drs. Reynold J. Kirkland, John Rogers, D. Emmet Welsh and Louis A. Roller; skin diseases, Dr. Charles E. Hooker; pathologist, Dr. Joseph B. Whinery, and Dr. Apted, house physician.

Personal.—Dr. Guy L. Noyes, Ann Arbor, demonstrator of ophthalmic and aural surgery in the University of Michigan, has been made professor of ophthalmology in the University of Missouri.——Drs. John H. Kellogg, William H. Haughey and George W. Green have been appointed as consultants to the health officer of Battle Creek.——Dr. Thomas M. Coon has been elected health officer of Grand Rapids.——Dr. Jesse O. Parker has been appointed health officer of Owosso.——Dr. William A. Burnham, Hancock, has been appointed physician at the Trimountain mine.——Dr. Robert W. Erwin has been re-elected president of the Bay City Board of Health.——Dr. Robert J. Davison, Foresthill, has moved to Shelby.——Dr. T. Bennett Scott, Vernon, has located in Owosso.——Dr. John W. Doyle, St. Joseph, has moved to Fond du Lac, Wis.——Dr. John H. Kellogg, Battle Creek, sailed for Europe May 10.——Dr. Henry R. Morris, Sebewaing, has sold his practice to Dr. Wilhelm W. Kahn of Frankenmuth, and will take advanced studies in the East.——Dr. John F. Cardwell, Durand, has located in Toledo, Ohio.

NEW JERSEY.

Hospital Items.—By the will of the late James Atkinson, $1000 is left to the Paterson General Hospital.——More than $20,000 has been expended in building and furnishing the isolation hospital at Camden.——The new hospital at Perth Amboy is now open for patients. It cost nearly $30,000.

New Jersey Sanatorium for Tuberculosis.—The first meeting of the commissioners recently entrusted with the establishment of this institution was held in Newark April 30. The following officers were elected: President, Dr. Charles J. Kipp, Newark; vice-president, President Austin Scott, of Rutgers College; treasurer, Col. Edward A. Stevens, of Castle Point, Hoboken, and secretary, Dr. James S. Green, Elizabeth. It is the duty of the commission to select a site and erect suitable buildings for a sanatorium for indigent citizens of New Jersey afflicted with tuberculous diseases.

Mercer's Medical Staff.—The following medical staff has been appointed for Mercer Hospital, Trenton: Medical director, Dr. William Elmer; consulting physicians, Drs. William Elmer and Cornelius Shepherd; consulting surgeons, Drs. Thomas H. MacKenzie and Samuel W. Latta; gynecologist, Dr. Joseph B. Shaw; assistant gynecologist, Dr. Edward S. Hawke; pathologist, Dr. Ira M. Shepherd; assistant pathologist, Dr. Harry M. Anderson; attending surgeons, Drs. John Bruere, John S. Jamieson, Nelson B. Oliphant, and William McD. Struble; and resident physician, Dr. Daniel M. Hoyt.

Personal.—Drs. William Edgar Darnall and Emery Marvel have been placed in charge of the newly-established department of gynecology in the Atlantic City Hospital.——Dr. John W. Bennett has been re-elected president of the Long Branch Board of Health.——Dr. Frank D. Gray, Jersey City, has sailed for Europe, where he will spend a year in study.——Dr. Walter B. Johnson has been elected surgeon, and Dr. J. William Atkinson, assistant surgeon of the Paterson Eye and Ear Infirmary.——Dr. Rolland D. Tomlinson, Plainfield, has located in Atlantic City.——Dr. Samuel A. Heefer has been re-elected president of the Hoboken Board of Health.

NEW YORK.

Bequest to College.—The Albany Medical College has been bequeathed six valuable lots near Kansas City by the will of Dr. D'Estaing Dickerson of Kansas City, a graduate of the class of 1857.

Medical Staff Resigns.—The entire medical staff of the hospital at Jamaica, L. I., has resigned because of the refusal of the women board of managers to rescind a resolution providing for a double staff, including homeopathic as well as regular physicians.

Faculty Changes.—At a recent meeting of the faculty of the Albany Medical College, Dr. George Blumer was recommended for appointment as professor of pathology and bacteriology; Dr. Willis G. Macdonald, professor of abdominal and clinical surgery; Dr. Samuel R. Morrow, who resigned as professor of anatomy, was recommended for appointment as professor of the practice of surgery and orthopedic surgery; and Dr. Joseph D. Craig as professor of anatomy. The following appointments were made: Theodore J. Bradley, Ph.G., lecturer on inorganic chemistry; Dr. Spencer L. Dawes, lecturer on materia medica, and Dr. Arthur Sautter, instructor of genito-surgery and dermatology.

New York City.

Students Tribute to Dr. A. Jacobi.—As Prof. A. Jacobi has resigned as professor of diseases of children at the College of Physicians and Surgeons, Columbia University, the present graduating class intend to present to him a farewell salutation engrossed in Latin on parchment.

Knife Blade in a Man's Heart.—A young man who applied for admission at Bellevue Hospital May 6, and who was then thought to be suffering from alcoholism and pneumonia, died May 14, and the autopsy showed hemorrhage into the lungs and a portion of a knife-blade imbedded in the sternum and pericardium. The man had a lot of toughs for boon companions, and was known to have been badly beaten May 3.

Commencements.—Long Island College Hospital held its commencement May 16. Out of a class of 35, 26 were graduated.——The thirty-ninth annual commencement of the New York Medical College and Hospital for Women was held May 14. Rev. D. Asa Blackburn addressed the students; Dr. M. Belle Brown administered the Hippocratic oath and Mrs. Mary Knox Robinson conferred degrees on a graduating class of six.

Lying-In Hospital Needs Funds.—The fact that J. Pierpont Morgan spent more than $1,500,000 on the property and the magnificence of the new hospital has led most persons to believe that provision had been made for maintaining this institution. An appeal to the public explains that this is not so, and that the society must depend upon public generosity for about $60,000 of the $90,000 that it will cost to support the hospital each year.

New Surgical Dressing.—Dr. Robert T. Morris exhibited before the last meeting of the Surgical Section of the Academy of Medicine a new absorbent material for surgical dressings. It was found in bulk in the market under the name of "sulphite laps," and was used in the manufacture of paper. It is made by the action of sulphuric acid on wood, but is neutral in reaction. It is said to be not only very cheap, but far more absorbent than either absorbent cotton or gauze.

Wholesale Milk Inspections.—There have been so far about three times as much money imposed this year in fines upon milk dealers than for the same time last year, and a large number of suits are now in progress, the chief charges being dilution of milk with water, skimming off of cream and the improper use of preservatives in milk. That the present administration means business was emphasized the other night when fifty inspectors of the board of health and an equal number of sanitary policemen went to all the depots and landings for milk in the city and took hundreds of samples of suspicious milk for analysis. The milk in the cans must not have a higher temperature than 50 F.

Buffalo.

Personal.—Dr. Charles Bingham has been appointed interne at the German Deaconess' Hospital.——Dr. Charles Howard has been chosen president of the board of managers of the Elmira Reformatory.

Dr. James M. Anders, Philadelphia, addressed the Medical Section of the Buffalo Academy of Medicine on the subject of "Jaundice," with reports of cases. Previous to the meeting Dr. Anders was the guest of honor of a luncheon by Dr. Allen Jones and of a dinner at the Saturn Club by Dr. Charles G. Stockton.

The Separation of the County Hospital from the Almshouse is again under discussion. The Overseer of the Poor under the present conditions does not favor sending city patients to the county hospital because it stigmatizes them as paupers, so that during the past year the city has expended $50,000 in sending its indigent to private city hospitals.

Unification.—As an illustration of the present trend toward unification of the medical profession, two prominent physicians in homeopathy, one the secretary of the New York State Homeopathic Society, have voluntarily applied for membership in the Erie County Medical Association and have been accepted. These physicians are to be regarded as regular practitioners. It is expected that many others will follow their example and soon the profession of New York State will indeed be united.

PENNSYLVANIA.

Coatesville Hospital.—Subscriptions to the amount of $25,000 have now been received for the erection of a new hospital at Coatesville, and the building will be commenced at once.

Allentown Hospital.—The new wing to Allentown Hospital, erected at a cost of $33,000 by the munificence of James K. Musser, and furnished by other citizens, has been opened. The new building will accommodate 75 patients.

New Hospital for Johnstown.—A project for a new public hospital in Johnstown is well under way. Dr. John W. Hamer is president of the provisional board of directors, whose membership includes Drs. William J. George and Ira E. Sloan. A site for the hospital has been purchased for about $6000.

Bound to Fee Bill.—Fifteen physicians of Carbondale have agreed to adhere strictly to a fee bill, and accept no society, lodge or poor board work, except at regular fee-bill prices. They have further promised that for the filling out of all affidavits, death claims, insurance examinations or other papers in which there is a money consideration, they will always make a charge, never less than fifty cents.

Philadelphia.

Jefferson Commencement.—At the commencement of Jefferson Medical College, May 29, the Hon. Charles Emory Smith will deliver an address.

Dr. Nicholas Murray Butler, president of Columbia University, New York, will deliver the oration at the commencement exercises of the University of Pennsylvania, to be held at the Academy of Music, June 18.

Chair Declared Vacant.—The trustees of the Medico-Chirurgical College have declared the chair of genito-urinary surgery, occupied by Dr. Elwood R. Kirby, vacant. No reason for this radical action has been officially made public.

Women Graduate.—The fiftieth annual commencement of the Woman's Medical College of Pennsylvania was held May 21. On the evening of the same day, a reception from 8 to 11, in honor of the graduating class, was given at the college building by the corporators and faculty.

Insane Department Overcrowded.—The superintendent of the Philadelphia Hospital recently reported to a special legislative committee that there were 1444 patients in the insane department of the hospital. The proper capacity of the department is 900 to 1000. With 60 per cent. of the inmates insanity existed in the family; 10 per cent. of the cases were ascribed to alcoholism, leaving 30 per cent. due to other causes. The enactment of more rigid marriage laws was recommended.

Municipal Hospital To Be Moved.—The first decided move toward the removal of the municipal hospital and pesthouse from its present location has been made. The council's committee on city property recommend the purchase of 62 acres of land for $115,000, situtated at Kensington Avenue and Oxford turnpike. This is near the Montgomery County line, on the outmost limits of the city, and yet readily accessible from the center by trolley lines. The ground is elevated, is thought to be well adapted to the purpose, and will in all probability be secured.

GENERAL.

Tua-tua for Leprosy.—The South American plant called tua-tua is said to have properties highly effective in the treatment of leprosy. Dr. Shorey, food inspector of the Honolulu Board of Health, is conducting an investigation of the properties of the plant.

Few Lepers at Guam.—Commander Schroeder, naval governor of Guam, reports the finding of some of the lepers whom the Spanish had segregated at the Asan hospital, who escaped during the interregnum following the Spanish withdrawal. These have been concealed by the natives. Some eight have been found, and it is doubted whether many other cases exist. Governor Shroeder says there is no evidence that the disease has been disseminated by the lepers during their freedom. The population of the island of Guam, although variously estimated, is probably about 12,000, and the native portion is decreasing slowly. Aside from the army and navy forces of perhaps 600, foreigners number about 300, including many Japanese. The lepers will be segregated on the shores of a beautiful bay a mile east of the capital.

The Anti-malarial Campaign in Italy in 1901.—The Italian Adriatic R. R. entrusted Dr. Ricchi last year with the task of protecting their personnel over their entire lines in upper and middle Italy which pass through some of the most malarial regions known. The measures already described were carried out at every station: wire netting over doors, windows and chimneys, spring doors to netting vestibules and also to the bedrooms inside the house, hats protected by a veil of wire netting with a curtain of soft gauze attached to the lower edge to be tucked into the clothing, and gauntlet gloves. The expense was not so great as anticipated, and the results showed that only 2 per cent. of the perfectly protected employes contracted malaria, and only 13.31 per cent. of the less perfectly protected, while 38.71 per cent. of the control population were affected. About 212 houses with 1600 persons, station agents and their families were completely protected, and 25 houses with 406 inmates were the entirely unprotected control material. The total number of persons under observation was 2657, of whom 2009 had previously suffered more or less from malaria. The latter were treated with quinin during the premalarial season, but after it opened all medication was suspended. Dr. Schiavuzzi of Trieste has been commissioned to do a similar work for the Istrian R. R. on the east shore of the Adriatic.

Examination for Marine-Hospital Surgeons.—A board of officers will convene at the Marine-Hospital Bureau, 3 B street, S. E., Washington, D. C., June 16, for examining candidates for the grade of assistant surgeon in the U. S. Marine-Hospital Service. Candidates must be between 21 and 31 years of age, graduates of reputable medical colleges, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examinations: 1, physical; 2, oral; 3, written; 4, clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery and hygiene. The oral examination includes subjects of preliminary education, history, literature and natural sciences. The clinical examination is conducted at a hospital and when practicable, candidates are required to perform surgical operations on a cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment, the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco. After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority and after due examination as vacancies occur in that grade. Assistant surgeons receive sixteen hundred dollars, passed assistant surgeons two thousand dollars, and surgeons twenty-five hundred dollars a year. When quarters are not provided, commutation at the rate of thirty, forty and fifty dollars a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per cent. in addition to the regular salary for every five years' service up to forty per cent. after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address Supervising Surgeon-General, U. S. Marine-Hospital Service, Washington, D. C.

The Philippine Cholera Order.—In view of the threatening aspect assumed by cholera in Manila the following general order, No. 58, was issued March 23, 1902, from the Headquarters of the Philippines:

1. Asiatic cholera is a disease the infection of which is taken in by the mouth; as a preventive measure it is therefore necessary to eat or drink only articles in which the infective principle has been destroyed by distilling, cooking, etc. Unboiled water, including aerated waters not imported, and sorbete, the native ice cream, fresh vegetables of any sort, as lettuce, cabbage, fresh fruits, etc., which are not cooked in their preparation, are, therefore dangerous and to be avoided. In addition, the greatest care must be given to the preparation of foods and dishes on which they are prepared or served. The infection may be carried by washing such dishes with infected water or by wiping them with cloths which have been washed in such water.

2. All officers stationed in this division will give personal instructions and care to see that no member of their family or servant in their household drinks water that has not been distilled, or if not distilled, that has not been thoroughly boiled for at least twenty minutes, or any aerated waters except those imported, or sorbete, or eat fresh vegetables or fruits of any sort which has not been thoroughly cooked. Further personal care and superintendence is enjoined in the use of boiled water in the washing of dishes and thorough boiling of the cloths which may be used to wipe such dishes. The irresponsibility and ignorance of native cooks render careful personal supervision of the kitchen imperative in order to avoid this disease.

3. The same care is enjoined as specified in the preceding paragraph in the use of water and preparation of foods in barracks or other buildings or camps where enlisted men or government civilian employes are stationed. All soldiers and all U. S. civilian employes

in this division are forbidden to use water for drinking obtained from rivers or wells in the vicinity of Manila unless the same has been distilled or thoroughly boiled. No excuse for ignorance in regard to this will be accepted, and proper disciplinary measures will be applied for any detected violation of this paragraph.

4. In order to prevent possible infection of food by flies, company commanders and other persons in the military service or attached thereto, in charge of messes, are enjoined to take the necessary measures to protect all food from flies and other insects. That this may be carried out food should not be placed on the table until immediately before it is to be served and should be covered at all times. The attention of company commanders and other persons in the military service or attached thereto, is called to the necessity of care in covering the contents of dry earth or other closets with earth or chlorid of lime, in order that flies may not have access to such contents with possible later transference of infectious material by such flies to foodstuffs.

5. As the Division Commander can not be certain that saloonkeepers will not serve unsterilized water for customers to drink, all persons in the military service or civilian employes therewith, are directed to confine their drinks at saloons, if they drink at all, to beer.

6. A sentinel or responsible watchman will be posted at every faucet where water is obtained from city water mains for Army use, and such sentinel or responsible watchman will be instructed to permit no person to drink thereat.

7. All officers and employes of the transport service, ships chartered or otherwise employed in the military service will be at once warned to comply strictly with the foregoing regarding consumption of vegetables, etc., and drinking water.

8. All persons affected with diarrhea or vomiting will report themselves immediately to their medical officers for treatment.

9. All cases of cholera or cases suspicious of that disease coming to the notice of medical officers will be immediately reported by telegraph to the chief surgeon of the division.

10. Cholera having made its appearance in Manila, careful attention to diet and the use of water rendered safe by boiling, with the avoidance of insanitary localities, are all necessary in order to secure immunity from that disease.

11. This order will be read to all troops as soon as received and a copy kept posted in all barracks, quarters and camps.

San Francisco Plague Report.—The following record of the autopsy findings on the last case of plague in San Francisco will be of interest. The patient was Chin Suey Kim, aged 30, male, who arrived from Davisville, Cal., on the evening of April 17, took quarters at Man Fook On's undertaking establishment at 838 Clay Street, and died at 5 a. m., April 20, 1902.

Autopsy at 2:15 p. m. Body well nourished. General postmortem lividity unusually well marked in places, especially over the biceps of the arms; the body was almost black. No signs of wounds, lesions or trauma. No glandular enlargement noted by palpation, but a sense of increased resistance over the right femoral region.

Incision made over right femoral region, and several enlarged, necrotic, hemorrhagic edematous glands discovered. Smears from these showed bipolar cocco-bacilli decolorizing by Gram's, having every appearance of bacillus pestis.

Abdominal cavity opened. Intestines and appendix normal. No fluid in abdominal cavity. Spleen enlarged to five times normal. No signs of portal obstruction to account for such enlargement; rather soft; capsule tense; no subcapsular nodules. Surface almost uniformly pink with a few slightly pigmented areas; pulp bulging very slightly; connective tissue increased.

Lungs adherent to pleural cavity by rather fresh, soft adhesions, especially the right. No fluid in pleural cavity. Surface of heart normal. Left ventricle hypertrophied and empty. Right contained fluid. Right and left auricles contained postmortem blood clots and fluid blood. Left lung normal size, pleura glistening, except the adhesions before mentioned. A few subpleural hemorrhages, organ crepitated throughout, pitted on pressure. Cut surface moderately rich in blood. Air, blood and serum exuded on pressure, in the usual proportions. Right lung covered with blood-stained lymph exudate, a pleurisy of several days' standing; cut rather firmly, cut surface moderately rich in blood; crepitated throughout. Air, blood and serum exuded on pressure.

Left kidney: fatty capsule normal in amount. Organ as seen through fibrous capsule had a white appearance in which the vena stellata were prominent. Organ enlarged and softer than normal. Fibrous capsule removed easily, exposing a very lightish yellow surface; cut surface moderately rich in blood; contrast between cortex and pyramids fairly well retained in areas and lost in others. Blood vessels injected throughout organ. Kidney normal in appearance (white kidney, early stage). Liver enlarged to about one-quarter above its normal size; capsule very tense; of a general reddish appearance; with mottled areas of light reddish-yellow; capsule smooth, glistening and transparent; no hemorrhages on subcapsule. Softer than normal; cut very easily, cut surface rich in blood; structural appearance well retained.

Endocardium, surface of aorta, and coronary opening, apparently normal. Heart muscles of left ventricle thickened, normal appearance, showing neither fibroid nor fatty change; 2 or 3 sub-endocardial hemorrhages.

Stomach empty. Intestines: mesenteric glands enlarged; no injection of intestines; small intestines opened; blood vessels found injected and follicles enlarged. One of enlarged mesenteric glands removed and found to be neither injected nor necrotic. Bladder completely empty.

Incision made in left femoral region, although there was no appearance or indication of glandular enlargement, nor could glands be felt by palpation, yet the glands were found to be moderately enlarged, necrotic, and slightly edematous; being imbedded in quantities of fat, they could not be felt. Incision made in right axillary region and glands found in same condition. One such gland was found in left axillary region. Smears from spleen showed a few bacilli, which appeared to have been partially disintegrated, although some of them still retained their bipolar staining qualities.

Anatomic diagnosis: Pleurisy, fibrous exudate; acute pulpitis of spleen, and chronic connective tissue increase of same; venous congestion of liver; hypertrophy of left heart, bubonic plague; septicemic plague. Cause of death, bubonic plague. (April 25, confirmed bacteriologically.)

Opinion of Ohio, Indiana and Kentucky on Plague in San Francisco.—At the annual conference of the boards of health of these states, the smallpox situation was thoroughly discussed. The following action was taken on the plague scandal in California:

We, the representatives of the State Boards of Health of Ohio, Kentucky and Indiana, together with representatives of the county and city boards of health of Indiana, in conference assembled in the city of Indianapolis, April 25, 1902, in view of certain documentary evidence before us, do resolve as follows:

1. We view with surprise and alarm the acts of the Governor of California and the Mayor of San Francisco, in attempting to suppress the facts relating to the presence of bubonic plague in that city. We are surprised at such attempts because we regard the facts as fully established and beyond all question. The Board of Health of the City of San Francisco, composed of honorable gentlemen distinguished for their scientific attainments, and holding the entire confidence of their associates and the public, published the facts in their monthly report to the city government, submitting therein all necessary data. The existence of the plague in said city was afterwards confirmed, by an expert, sent there by the United States Marine-Hospital Service, also by an expert employed by the State Board of Health, and finally by a commission of eminent bacteriologists of international fame, whose sole interest in the matter was to know the truth.

2. We view with alarm this attempt to suppress the fact of the presence of an epidemic disease, the most deadly known to medical science, because with bubonic plague and cholera in a number of ports on direct communication with that of San Francisco and with the energies of the governor of the state and the mayor of the city directed to the suppression of truth rather than the plague, what guarantee has the interior that it will long be exempt from the pestilence.

3. We condemn and deplore the acts of the governor of said state in attempting to discredit the competency and veracity of the experts above mentioned; for forcing the resignation of certain members of the State Board of Health because they concurred in the expert conclusions; for seeking to unduly influence the United States Treasury Department, and for making denial of the existence of plague a condition of appointment to the vacancies caused by the above resignations.

4. We condemn and deplore the act of the mayor of San Francisco in co-operating with the governor as above set forth, and for removing from office the city board of health of San Francisco for no other reason than that in the faithful discharge of the duties imposed upon them by law, and their endeavor to protect the lives and health of the citizens of that metropolis, they published the presence of the plague, and maintained their honor against all contrary influences.

5. We further declare, it is beyond our comprehension how any member of the honorable profession of medicine, conscious of the dignity of this high calling, and zealous for maintenance of that dignity could accept appointment to vacancies thus created under the condition expressed or implied.

6. We affirm that in every state, territory and municipality of the United States where the representatives of the people have enacted laws for the protection of the lives and health of their citizens and have appointed boards whose duty it is to execute those laws, the citizens of said states, territories and municipalities have a right to hold said boards to the faithful performance of their duties, and to the prompt and effectual use of every means which the law allows and sanitary science approves for the prevention of the introduction and the spread of epidemic diseases.

7. We further affirm that in the employment of such means, it is absolutely necessary to notify the public of the presence of said epidemic disease, point out the locality in which it has appeared, indicate its progress, etc., in order that the public, having knowledge, may co-operate in its extinction.

8. We further affirm that in pursuance of these measures and in answer to the rightful demand of citizens for protection, infected houses should be placarded conspicuously, and if found necessary, guards should be employed and detention and isolation hospitals erected; in the employment of which measures together with general disinfection publicity should be courted rather than avoided.

9. We further affirm that, where the responsibility of protecting the public health rests solely upon said boards, no other authority, however high, should thrust itself between them and their duties, and where individuals or corporations interfere to prevent the discharge of said duties, such should be made amenable to the law.

Lastly, we call upon sanitary associations, boards of health, medical and scientific associations throughout the country to join with us.

The above expression was fully discussed and finally adopted unanimously by the conference. The following gentlemen from other states were in attendance: Pres. Byron D. Stanton, and Sec. Charles O. Probst of the Ohio State Board of Health; Pres. Wm. Bailey and Sec. J. N. McCormack of the Kentucky State Board of Health. All of these gentlemen formally concurred in the above action in regard to plague in San Francisco.

Smallpox.

Colorado: Compared with March the month of April shows an increase of 37 cases; the number reported for the month was 291. The number of cases is, however, 139 less than in April, 1901. The State Board of Health has established a definite period for quarantine of smallpox, providing that the minimum period of quarantine for those suffering from smallpox shall be not less than four weeks from the beginning of the eruption, and in any case not less than ten days after scaling is completed.

Connecticut: Smallpox has almost entirely ceased. Fresh cases of the disease have appeared since the last bulletin was issued, in only a few towns. This peculiar exemption of Connecticut, as compared with other states, can only be attributed to the protective influences of vaccination. School visitors have required vaccination as a prerequisite to attendance of pupils. Health officers have advised and promoted vaccination in many towns in advance of an invasion of the disease and so the people have been protected.

Even in the towns not so prudent, the vigilence of health officers in isolating the primary cases has limited the disease in most instances to few cases. The conspicuous exception was in Waterbury, where the disease appeared in a block of tenements occupied mostly by French-Canadians. Even there it would have been controlled if prompt notification of its presence had been given. Its spread in Waterbury is alleged to have been due to the pernicious influence of an anti-vaccination society existing there, whose members have been charged with encouraging the concealment of the disease, and with bold assertions publicly made that the disease among them was not smallpox. By request of the mayor and the health authorities of Waterbury two members of the State Board of Health visited and personally inspected the patients in the hospital and in private houses and in every instance found only typical cases of smallpox. The diagnosis was still further confirmed by the evidence of Dr. C. N. Valin, an eminent specialist from Montreal whom the French people themselves employed in order that their doubts should be fully removed.

The number of cases reported in Waterbury was 79, which far exceeded that of all the other cases in the state during the year. How much its extensive prevalence there, with all its expensive and distressing results, is chargeable to the baneful influence of the anti-vaccinationists can be best appreciated by those who know all the facts. The practice of vaccination and the isolation of the existing cases promptly arrested its spread.

This office is in receipt of reports of 141 cases occurring within a year. Only one case has been reported in the last three weeks. A very large majority of these were never vaccinated. Seven of them had been vaccinated from 7 to 40 years before. There were eleven cases about which reliable information has not been given respecting vaccination. All the others were unvaccinated. All of the deaths were of the not-vaccinated. How can the anti-vaccinationists explain these facts?

Illinois: The Department of Health reports that ten out of the nineteen new cases discovered last week were among colored people, and since the first of the year this factor of the population, numbering only 1.3 per cent. of the total, has furnished 35 per cent. of all cases. The colored pastors, physicians, lawyers and other influential leaders of the race, having been made acquainted with these facts, are taking steps to secure general vaccination and to promote sanitation among their people in order that this stigma may be removed.

The situation is less hopeful in other respects. An immigration movement of enormous proportions is flooding the northwest with thousands of the newly-arrived who are passed on from ports of arrival into the interior without any supervision as to their vaccinal condition. Chicago, as the great distributing point, is peculiarly exposed and appeals have been made by the commissioner to the federal, state and local authorities to enforce proper precautions at ports of entry to the end that no immigrant or his belongings may leave such ports until vaccination and disinfection have made it certain that they shall not be carriers of contagion into the country.

Kansas: Of the 457 cases of smallpox reported in Kansas during April, only one resulted in death.

Maryland: Dr. John S. Fulton, secretary of the State Board of Health, reports 25 cases of smallpox in the state: 9 in Allegany County, 2 in Washington County, 1 in Baltimore County, 1 in Queen Anne's County, 4 in Caroline County, 2 in Talbot County, 1 in Dorchester County, and 5 in Baltimore City.——Others officers report a case of smallpox in Caroline County, and 1 in Dorchester County.

Michigan: During April smallpox was reported at 236 places in the state, 9 places more than in the preceding month. Five deaths were due to the disease.

New York: Lately several cases of smallpox have been concealed in this city and vicinity by faith-curists or those in sympathy with them. A particularly flagrant example of this crime against the community occurred in Newark, and was only discovered through the publication in the official paper of the sect of an article boasting of the recovery from smallpox of a man through the "laying on of hands and through the influence of the Holy Ghost." The woman who did the nursing and her son both contracted smallpox, the former becoming blind as a result.

Puerto Rico: It is reported that, thanks to the effective measures taken by the local sanitary board, under the direction of the sanitary officer, Dr. Lopez Gastambide, the varioloid epidemic is rapidly decreasing.

CANADA.

The Montreal Dispensary.—The fifty-second annual meeting of the Montreal Dispensary was held in that city last week. The secretary's report for the committee of management showed that during the past official year the applicants for advice and treatment had numbered 16,675. The medical and surgical cases numbered 8505; eye and ear, 2069; women's diseases, 1725; nose and throat, 912; skin diseases, 1725; children, 1327; dentistry, 154.

Insane in the Toronto Jail.—The special civic committee of the Toronto municipal council, which has been enquiring into certain charges preferred by one of the aldermen with regard to the confining of insane people in the Toronto jail, has had its report adopted by the council. At the time of their visit to the institution they found thirty-one lunatics lodged within the walls. In addition to these there were a number of idiots, imbeciles from birth. The report recommends that the Provincial Secretary take steps for the prompt removal of the insane to proper asylum quarters.

Personal.—Dr. Russell Thomas, Lennoxville, Quebec, secretary of the St. Francis District Medical Association, has gone as medical officer with the fourth contingent to South Africa.——Dr. R. E. McKechnie, Nanaimo, B. C., is spending three months in a post-graduate course at McGill University. When that is finished, he will go to New York and thence to England and the continent.——Dr. A. F. Mayburry, Toronto, has gone to England and Vienna for a post-graduate course in nose and throat.——Dr. William Corlett, Cleveland, will give a lantern demonstration on the exanthemata at the coming meeting of the Canadian Medical Association in Montreal in September.

Dominion Registration Passes Its Final Stage.—When Dr. Roddick's Bill for the establishment of the Dominion Medical Council came before the senate, or upper house of the Canadian Parliament, three important amendments were made. No province shall be represented on the council either by elected or appointed members until after the said act had been adopted by the legislature of the province, and had thereby accepted the registration under this board with the provincial board in lieu of the registration with the provincial board. A clause was also added that the act shall not interfere as conveying any power to open medical schools or give medical education. Provision was further added which would prevent the act from becoming retro-active. Subsequently the Commons concurred in these amendments; and the Governor-General has affixed his signature to the bill, which appears among the legislation of the past session as "An Act to Provide for the Establishment of a Medical Council in Canada." Dr. Roddick can well be congratulated upon the success which has attained his efforts, especially so when it is remembered that this subject has been agitated with more or less vigor since the Confederation of 1867.

FOREIGN.

Mexico Hospital Improvements.—The hospital of the St. Vincent de Paul Society, in the City of Mexico, for the treatment of the poor, is to be enlarged and have its facilities increased.

Virchow's Resignation.—Virchow has gone to the watering place Teplitz-Schönau for the summer, and has resigned the presidency of the Berlin Medical Society, which he has held for twenty years.

Prefers Money for Hospital.—King Edward has expressed the desire that the offerings customarily made the ruler in honor of the coronation should be in the form of additions to the king's hospital fund.

Medical Women at Medical Congresses.—The recent German Congress of Internal Medicine had two women as members for the first time. Our exchanges also mention that the chairman of the section of surgery at the recent Russian Medical "Pirogoff" Congress was a woman, Dr. A. G. Archangelskaia.

Sanitary Homes in Germany.—The architects in the service of the government are now required to attend a two weeks' course of lectures on sanitary dwelling houses. The lectures are delivered by the official chief of the architect service, and by a physician, Professor Kossel. The attendance at a single course is restricted to 20, and the lectures are given in the Institutes of Technology at Berlin and Hanover. The *Deutsche Med. Wochenschrift* considers this arrangement a very important progress in the line of sanitation.

Important Congresses in Europe During September.—The International Conference for the Prevention of Syphilis and Venereal Diseases opens at Brussels, September 1 to 6. This is followed by the International Congress of Gynecology at Rome, September 15 to 21, and the Seventy-Fourth German Congress of Naturalists and Physicians "of theory and practice" at Carlsbad, September 21 to 28. The Second International Congress of Electrotherapy and Radiography meets at Berne, September 1 to 6. The first was held at Paris in 1900. The French Congresses of Surgery and of Urology also usually meet at Paris in September.

France Is Disquieted Over Health Affairs in her colonies. Leprosy exists in most of them, cholera has cost thousands of lives, other infectious diseases are on the increase and foreign residence and enterprise are made very dangerous. Dr. J. Crespin, a professor in the school of medicine at Algiers, was commissioned by the French Minister of the Interior to study sanitary conditions in the Persian Gulf. He reports the danger of the infection of Europe through the Persian Gulf to be great, and recommends the island of Ormuz as a quarantine and examination station for all vessels. Persia is also worried over the danger. Some French papers urge a conference of European powers to co-operate in sanitary measures.

Sanatorium for Venereal Diseases.—The Berlin insurance company "Landesversicherungsanstalt Berlin" has derived such pecuniary benefit from its sanatoria for its tuberculous policy holders, that it has now erected a similar sanatorium for venereal diseases. It expects to save much expense by the thorough treatment of its policy holders in a closed institution, where they will not only be cured, but contagion of others will be prevented. During the absence of the breadwinner in the sanatorium a pension will be paid to the family. The company has issued an appeal to all the sick insurance societies and to physicians in general urging them to coöperate and to do all in their power to remove the prejudice which may prevent persons affected with venereal diseases from entering such an establishment. It is arranged for fifty beds and takes only men, but if it proves successful, it will be enlarged and others built.

Plague in Australia.—Our regular London correspondent gives this week statistics of the situation in Australia and from a Sydney correspondent we learn additional facts. The plague is an indirect benefit in one particular—the cities are being cleaned of refuse, old unused sewers closed up, and other places of refuge for rats are being removed. In Sydney, disinfectants and rat-poison have been distributed free for the past three months, and when the scare was at its worst 3000 applicants were supplied daily. Phenyl and chlorid of lime are the disinfectants used, arsenic and phosphorus the rat poisons. The total cost of these to the middle of April was $3000, aside from the wages of the inspectors, cleaners, rat-killers, etc. Sydney is a wide-awake and up-to-date city fortunately, for she is constantly exposed to danger of disease from the immense amount of shipping that comes to her harbor from every part of the world.

LONDON LETTER.

Smallpox Decreases.

The epidemic of smallpox, which has prevailed so long, at last shows a tendency to decline. The number of cases in the metropolitan hospitals is 1442, against 1431 and 1515 in the preceding weeks; 250 new cases were admitted during the week, against 274, 328 and 367 in the three preceding weeks. The deaths last week were 43, against 73, 42 and 42 in the three preceding weeks. Since August 6879 cases have occurred, of which 1175 have been fatal; in addition 874 extra-metropolitan cases have been admitted to the metropolitan hospitals, of which 132 were fatal.

Typhoid Fever in South Africa.

In the House of Commons Mr. Broderick, Secretary for War, gave some interesting figures as to the epidemic of typhoid fever, which has proved such a serious obstacle to the British army in South Africa. In the three months, December, 1901, to February, 1902, 6379 cases occurred among the troops, causing 953 deaths; in the corresponding period of last year there were 5905 cases and 1042 deaths. During the last few months most of the cases have come from the moving columns, and comparatively few occurred in the camps and stationary garrisons where special precautions are enforced as to boiling of the water.

Statistics of the Plague.

In the week ending April 12 there were in India 1100 deaths more than in the previous one, the total mortality amounting to 24,380. In Bombay City a rapid decline has taken place: for the week ending April 5 there were 947 deaths, ending April 12, 696. In the Bombay Presidency the corresponding figures were 3170 and 2093; in Calcutta 603 and 689. In Bengal the deaths during the week ending April 12 were 603, in the Northwest Provinces and Oudh 1660 (against 1570 in the previous week), in the Punjab 16,281 (against 14,871), in Cashmere 212, against 416; in Mysore 80, against 173. In Egypt, during the week ending April 27, 18 fresh cases and 8 deaths occurred; during the month of April there were 102 fresh cases and 58 deaths. Since April 7, 1901, when the disease reappeared in Egypt, the total number of cases was 484, of which 281 were fatal. During the week ending April 5, 2 fresh cases occurred in Cape Colony: two natives were found dead, which shows that the disease is concealed. During the week ending April 12 there were 5 fresh cases and 3 deaths. The total number of cases of plague up to date is 885, with 427 deaths. At Hong Kong, during the week ending April 26, there were 5 cases and 5 deaths; ending May 3, 28 cases and 26 deaths. In Australia, during the present recrudescence, 109 cases have occurred, of which 27 were fatal. Twenty-one animals, including two birds, have died of plague in Sydney, in the Zoological Gardens. At Brisbane a few cases occur daily.

Army Medical Reform.

Previously in THE JOURNAL we have referred to the scheme of reform of the Army Medical Department which the government has brought forward under pressure of the so-called "hospital scandals" in the South African war. The complete new regulations are now published. On the whole they are a distinct advance and should greatly improve the service. The entrance examination is greatly changed and made completely clinical and practical. It will be partly written and partly oral. Thus, in medicine the written part will consist of examining and reporting on a case in a hospital, 125 marks being allotted for the examination and 125 for the commentary thereon. The oral examination in medicine will consist of clinical cases (75 marks), and morbid anatomy and histology (75 marks). In surgery there will be a similar examination and report on a case. In the oral examination clinical cases, including diseases of the eye, surgical instruments and appliances will be the subjects (75 marks) and operative surgery and surgical anatomy (75 marks). Candidates who gain places will undergo two months' instruction in hygiene and bacteriology, after which they will be examined in these subjects. Then they will proceed to the depot of the medical corps at Aldershot for three months' instruction in technical duties of the corps, which will be again followed by an examination. A lieutenant on probation who fails to qualify in either of these examinations will be allowed a second trial, and should he fail will be placed at the bottom of the list. Should he again fail his commission will not be confirmed. For promotion to captain an examination in regimental duties, drill, military law, military hospitals and other executive duties must be passed. For promotion to major an examination must be passed, which may be taken at any time after completing five years' service. The subjects will be medicine, surgery, hygiene, bacteriology and tropical diseases, and one special subject from the following list: bacteriology (including preparation of antitoxins), dental surgery, dermatology, laryngology, midwifery and gynecology, operative surgery (advanced), ophthalmology, otology, pediatrics, psychologic medicine, skiagraphy and specific fevers. For promotion to lieutenant-colonel there will be an examination which may be taken any time after three years in the rank of major. The subjects will be military law, army medical organization, sanitation of towns, camps, transports, epidemiology and a special subject from this list: medical history of important campaigns, army medical service of other powers, and laws and customs of war in relation to the sick and wounded.

The Dangers of Celluloid.

From time to time during the last 10 years cases of severe burns from the accidental catching fire of celluloid ornaments and collars have been recorded, both in the lay and the medical press. In 1898 the *Lancet* appointed a commission to investigate the subject which showed, by placing a celluloid comb in a wig at varying distances from a glowing fire, the probability of accidents to wearers of such an article. It was further found that a curling iron heated to the temperature necessary for curling readily started the evolution of dense and highly inflammable fumes. Later, the *Lancet* showed the danger of exposing celluloid toys in shop windows near electric lamps. The following illustrate the accidents from celluloid: A man while smoking a cigar was playing an American organ with

celluloid keys. Some red-hot ash dropped on the keys, and they burst into flames, which were extinguished with difficulty. A boy was wearing a celluloid collar tied with string. To remove the collar he burned the string. The collar ignited and lighted drops of the composition fell on his clothing. His throat and face were badly burned. In the *Lancet* of February 22 Professor Ogston of Aberdeen describes the case of a woman who, seated before a fire which was not unusually strong, found her hair enveloped in smoke and flame from ignition of the comb. Before the flames could be extinguished an area of the scalp of 4 by 1½ inches was destroyed. The burn was of the third degree, and the hair of the injured area was permanently destroyed. It is urged that government should interfere and compel the manufacturers of celluloid to render it less inflammable.

International Congress on the Protection of Children.

This Congress will be held in London, July 15 to 18, under the presidency of the Earl Beauchamp, K.C.M.G. It will consist of four sections: 1, medical; 2, legal; 3, educational, and 4, philanthropic. The following are among the interesting subjects on the program: How far parental authority and responsibility should be recognized after the state has had to take charge of a child. What pressure can be put on parents who neglect their children so as to discourage others from a similar offense. Regulation of street trading by children. The relation of the state toward migratory, destitute, neglected and criminal children. The American system of probation officers. The reclamation of vicious children. Papers to be read should be forwarded to the assistant secretary, Mr. W. G. Lewis, 8 Wells Street, Gray's Inn Road, London, W. C.

Correspondence.

The Proposed National Board of Medical Examiners.

PHILADELPHIA, May 17, 1902.

To the Editor:—The soundness of the legal principle, that the regulation of the practice of medicine for the protection of the public comes within the general police powers of the state, is now regarded as fully established. Nearly four centuries ago the first statute was adopted in England for regulating medical practice. The preamble to this Act (3 Henry VIII, cap. ii) recites that physic and surgery were then practiced by "ignorant persons, who could tell no letters on a book, and by common artificers, smiths, weavers and women, who took upon themselves great cures; partly using sorcery and witchcraft, partly applying very noxious medicines to the disease." This statute enacted, under penalty, that no one should practice medicine without going before a board of examiners and receiving its approval. Since 1511, the date when this law was passed, many others have been enacted, all assuming that the authority to regulate the practice of medicine belongs to the state, as a measure of protection of the community against incompetence and fraud. The recognition of this principle, and the acceptance of the implied obligation, in this country, has led to the establishment of the various state medical boards, and boards of examiners and licensers, which now exist in nearly every state of the union. The good work already done by these boards, in the direction of raising the standard of medical education among college graduates, and in keeping out of the ranks of the profession imperfectly trained and incompetent applicants, is now generally conceded and gratefully appreciated by those who are interested in the welfare and have regard for the solidarity of the medical profession.

In the practical working of the law under which these state boards act, however, there has been developed a very serious drawback, owing to the fact that they are restricted in their jurisdiction to the geographical limits of the commonwealth from which their authority issues. The examining boards have their duties strictly defined. They are allowed no discretionary powers which would permit them to step beyond the letter of the law, which, as interpreted by them, requires only one form of examination to be employed, whether the applicant is a recent graduate, or he already possesses the right to practice in another state under the license of that state board. No concession can be made to the veteran, who already has good standing and who may have in his former place of residence acquired distinction, or even conferred honor upon American medicine. This is an opprobrium to the entire profession of this country, as long as it is allowed to continue. Men of the highest attainments who occupied professorial positions, being invited to membership in the faculty of a college in another state, have been compelled to sit down with neophytes and to be examined, possibly by some of their own pupils. The situation is embarrassing both to the distinguished guest and to the members of the board, who are simply doing their duty under the law.

In point of fact the legislation was never intended to apply to the higher ranks of the profession at all, but merely to guard the door of entrance against unqualified intruders. The president of the Pennsylvania State Board of Medical Examiners, Dr. Henry Beates, has given much time to the consideration of this unfortunate condition of affairs, and has labored to bring about a sort of interstate comity, by means of which the certificates of one state may be accepted as valid in another. He frankly confesses, however, that, as matters are at present, owing to the varying standards in force in different states, this plan is impracticable. Dr. Beates has recently suggested that the state boards shall establish a practitioners' examination, which shall be entirely clinical and practical. In other words, that there shall be two examinations: one for recent graduates, the other for practitioners, and of the latter at least five years' practice of medicine would be required. He believes that a certificate obtained by this special examination, would be regarded as valid in every part of the country by mutual agreement among the state boards.

An effort will be made at the Saratoga meeting of the American Medical Association to arrive at a solution of the difficulty by another route. Dr. William L. Rodman has made a very practical suggestion.[1] In brief, his plan involves the establishment of a voluntary board of national examiners, supplementary to the existing state organizations, to consist of six members, viz.: the surgeons-general of the Army, Navy and Marine-Hospital (Public Health) Service, and three representative civil practitioners, two to be elected by the House of Delegates of the American Medical Association, and one by the American Congress of Physicians and Surgeons. The proposed (voluntary) examinations are to be both theoretical and practical, and are to be held in Washington, or some other convenient large city, where hospital facilities can be utilized. It is hoped by the author of this plan that the certificate or diploma of such a distinguished board would be accepted, as a matter of courtesy, by state authorities anywhere in the Union, as satisfactory evidence of the owner's professional attainments and personal worth.

It is said that this plan has been unanimously endorsed by the delegates from the several state boards, meeting with the Committee on National Legislation recently in Washington, and that it will be recommended to the House of Delegates at the coming meeting. It may also be stated here that the president of the Pennsylvania Board of Examiners favors it and hopes that it will be adopted.

A number of years ago, the writer, while editor of the *Philadelphia Medical Times*, being impressed with the hardship imposed by this anomalous situation, suggested tentatively a plan that has some of the features of Professor Rodman's plan. It similarly contemplated a voluntary examination before a national board, and was based upon the acknowledged efficiency of the tests employed by the medical examining boards of the U. S. Army and Navy. It proposed that such examinations might be opened to civilians who did not intend to enter the public service, but who simply desired the distinction that would accrue from passing such a government or national board. The successful candidates could have an endorsement of the fact upon their diplomas. When thus fortified, it was believed that a *modus vivendi* could be established, through the courtesy of the state boards, by which diplomas with such endorsement could be accepted as sufficient evidence of the owner's proficiency anywhere in the United States, without further examination, except for personal identification. It is very evident that

1. THE JOURNAL A. M. A., May 10.

any solution that is offered, if it is to be carried into practice, will ultimately rest upon the favor of the several state boards and their willingness to co-operate. Very probably additional legislation may be required in order to give them the power of discriminating, so as to recognize the distinction between the two classes of candidates: 1, those who are required to demonstrate their fitness for the responsibilities of medical practice and, 2, those about whose fitness there is no question whatever. As a means of affording present relief to the members of the latter class, the writer would make the suggestion that the state medical societies might consent to co-operate with the examining boards. For instance, if a reputable member of the profession, who has been actively engaged in practice, for, say, ten years, desires to change his field of work he can apply for a certificate from his state medical society, which could be endorsed by the medical society of the state to which he is going. Such evidence of professional attainments might well be accepted by the examining board of the state concerned, and thus aid in carrying out the idea of interstate comity or reciprocity, while recognizing and upholding the dignity of the profession.

Very respectfully yours, FRANK WOODBURY.

A Voluntary Board Will Not Accomplish the Result Desired.

NEW YORK, May 17, 1902.

To the Editor:—I have read with great interest the article of Dr. Rodman in the issue of THE JOURNAL of the 10th inst. and your very able editorial on the same. You having invited a free expression of opinion pro and con, I take the liberty to analyze it and point out wherein I differ. The evil that this voluntary board of national examiners is expected to remedy is supposed to be this: that a graduate of a medical college of high standard, holding a certificate from a state board, is compelled to pass an examination in case of his removal to another state.

Will this proposed board accomplish the result? Any state which demands an examination from one possessing credentials of registration in a state with a high medical standard, will also refuse to recognize a license of a national voluntary board; as a matter of fact the multitude of examinations we are blessed with in this country are for the purpose of barring a brother practitioner from locating in that state.

Were it not for that, what excuse is there to demand an examination from a physician who has registered and was allowed to practice? It is un-American as well as unjust. Where is the fair play we Americans are proud of?

Your editorial admits that, should the volunteer national board be realized and all the states consent to relinquish their rights to the national board, this would only assist those that would pass the examination of the board, and no relief is suggested to the thousands of physicians who are in practice. What should the practitioner do who is unfortunate, and on account of sickness is compelled to change climate? The young man can take care of himself, he can pass an examination wherever he goes, but the older man, though he may be rusty on technical points, is far advanced on practical points, and to him the doors are closed. It is ridiculous that a man who was good enough for the community of one state should not be allowed to practice in another state.

What is the remedy for the multiple examinations of every state? The Association should put itself on record that every state which comes up to the standard should reciprocate, in other words, every licensed physician, whether he has passed a state examination or was exempt from it by reason of previous registration, should be allowed to register on the presentation of proper credentials, on paying the fee according to law.

We ought to be honest about it. When a physician is good enough, in a state that comes up to the standard, why should he be rejected by another state? The objection that the man who registered before the law passed does not come up to the standard is not well taken, because he has the advantage of experience instead. Some of the best teachers have never passed a state examination and some were even students of a two-year course. Their constant work and perseverance in study after graduation, combined with experience, raised them far above the average. Dr. Rodman further states: "The Committee on National Legislation, representing the A. M. A., has reported, advising against reciprocity and in favor of a national board of examiners. The committee had, however, been working upon the hypothesis that such a board could be created and sustained by act of Congress. Letters read from . . . . caused the committee to drop the idea of a national board created by act of Congress as such legislation would certainly be unconstitutional and in conflict with the several states. The states are sovereign and can not be coerced by the general government." A national board would be for the benefit of the community against impostors, and every state which is mindful of the common welfare would come under its folds sooner or later by its own free will. There would be no objection to a national board when accepted by a voluntary relinquishment of rights on the part of the state. But such a board must first have the stamp of the country at large, by an act of Congress, which would give it the high standing and reputation to gain the respect of the whole nation, as well as of foreign countries. The high standing of the surgeons-general of the Army, Navy and Marine-Hospital Service is not so much on account of their superior knowledge as it is on account of their position representing the national government. If such a board were made national it would then compare with the Royal College of Physicians.

I would suggest that a national body be created by Congress, to be called "The Commission of Health of the United States," with headquarters in Washington, to have supervision over all medical matters of the United States, such as the granting of certificates to candidates after successful examinations, which should suffice for the medical departments of the Army, Navy and Marine-Hospital Service, and for any state or territory which by consent relinquished its state authority. This commission should supervise the manufacture of drugs, chemicals, serum, etc. This commission should not interfere in commerce, acting only when requested by the manufacturer to examine his goods, and if they be found to be up to a standard, to issue a certificate to that effect. The members of the commission should consist of the surgeons-general of the Army, Navy and Marine-Hospital, and one member for every state, to be elected by the American Medical Association, yearly, of such states that consent to relinquish their state authority to the commission. And this commission should have a salaried officer to be in charge all the time with salaried assistants to carry on the duties of his office. Very truly yours,

L. W. ZWISOHN.

1085 Lexington Avenue, New York City.

A Broader National Examining Board.

JEFFERSON CITY, Mo., May 15, 1902.

To the Journal:—The medical profession has not been altogether wise in its efforts for state regulation of the medical art. In the very eager pursuit of the charlatan the dignified and careworn family physician was almost forgotten. Under the medical laws of the several states he has less freedom of movement than the plumber or the iron molder. Physicians do not always change location for a moneyed consideration, but oftentimes to engage in special work, or to lighten their labor, as the means of a longer and more comfortable life. We alone are responsible for the unfortunate condition, and we must apply the remedy. If the American Medical Association decides to create a voluntary national examining board, let it be on broader lines than suggested by Dr. Rodman of Philadelphia. Let us at least anticipate applicants for examination from Chicago, St. Louis, Louisville and San Francisco. And let it further be hoped that there will be recognition of state licenses already issued to physicians who have passed satisfactory examinations before state examining boards. We have physicians of great merit in all the states, and if the American Medical Association takes action in this matter at all, it must be upon the basis of intellectual equality of the profession in all the states. I do not think the state boards will consent to a

disregard of past examinations made by them, but I believe they would arrange with the national board for an endorsement of such, and also agree with the national board as to a standard of proficiency for future examinations. We do not want two standards of qualification in this country, nor do we want state board jealousy and possibly avarice aroused. The national examiners should have per-diem, not fees, for services. Judicious medical legislation can come only through broad, big-minded practical men, and there are many in the American Medical Association. Are they interested?

CHARLES PINCKNEY HOUGH, M.D.

Book Notices.

POLK'S MEDICAL REGISTER AND DIRECTORY OF THE UNITED STATES AND CANADA. With Index to the Physicians of the United States Arranged Alphabetically, with the Number of the Page on Which the Name Appears. Seventh Revised Edition. 1902. Cloth. Pp. 3008. Price, $10.00. Detroit, Baltimore, Chicago: R. L. Polk & Co.

This edition of the old standby directory of the medical profession of the United States and Canada is in many respects superior to former issues and gives evidence of painstaking care by the publishers. We congratulate them upon the degree of accuracy attained in registering so many thousands of practitioners, covering so vast a territory. The medical laws of every state and territory are revised to the latest date, the medical information for the Army, Navy and Marine-Hospital Service is replete, accurate and up to date, every medical school now in operation or extinct is recorded with full particulars of each, and the name, address and graduation particulars are given. This is supplemented by the usual alphabetical index of physicians, making it possible to ascertain the present location of any physician in America. It is to be hoped that the next edition will have a more substantial binding and that the coloring of the edges will be of such a material that it will not rub off in handling. A thumb index by states would be a valuable acquisition to the volume.

A MANUAL OF PRACTICAL ANATOMY. By the Late Alfred W. Hughes, M.B., M.C. Edin., F.R.C.S. Edin., etc., Professor of Anatomy, King's College, London. Edited and Completed by Arthur Keith, M.D. Aberd., F.R.C.S. Eng., Lecturer on Anatomy, London Hospital Medical College, etc. In Three Parts. Part I. The Upper and Lower Extremities. Illustrated by 38 Colored Plates and 116 Figures in the Text. Cloth. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1901.

This is the first of a series of three volumes intended as a guide to the dissection of the human body. The present volume describes the anatomy of the upper and lower limbs, and, so far as can be seen from our examination, the subject is presented in a most satisfactory way. The death of the author has put the work of arranging and editing the matter of the work into the hands of Dr. Arthur Keith, who has performed his task in an admirable manner, adapting the description of dissections, etc., to the later surgical procedures. The changes, however, as he says, will be more numerous in the parts yet to appear, as the present one was nearly complete at the time of the author's death. The dissection methods are adapted to the newer methods of preserving subjects. This is also an advantage. The illustrations are abundant and well selected to illustrate the text. Although most of them are taken from well-known authorities, many are original. The book is one that can be cordially recommended to the student in anatomy and will be a very valuable reference work for the surgeon.

ON DISORDERS OF ASSIMILATION, DIGESTION, ETC. By Sir Lauder Brunton, M.D., D.Sc., LL.D. (Edin. and Aberd.), F.R.S., F.R.C.P. Cloth. Pp. 495. Price, $4.00. London and New York: Macmillan & Co., Ltd. 1901.

This collection of various papers published at dates ranging from 1874 to 1900 forms a very readible volume of nearly 500 pages, which may well be added to any physician's library. Of course the matter in these essays is not new, but they are all of them timely and none are out of date, notwithstanding the time that has elapsed since their first appearance. The leading idea of a number of them, as the author says in his preface, is the action of enzymes, and this is a subject that is well to the fore in physiology at the present time. The longest paper, that on stimulants and narcotics, is a quasi popular but scientific statement of the leading facts in regard to these substances and others are almost equally practical in their tenor, though the inclusion of more strictly scientific and technical papers like those on gas absorption by the intestine and on the action of ferments keep the book within the stricter pale of purely medical works. It is of special value in giving many practical points in a clear and attractive way, and should find many readers.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING. By Charles Jewett, A.M., M.D., Sc.D., Professor of Obstetrics and Diseases of Women in Long Island College Hospital. Fifth Edition, Revised and Enlarged. Cloth. Pp. 84. Price, $0.80. New York: E. B. Treat & Co. 1902.

This little work has reached its fifth edition, which shows that it has met with popular favor. The author states that the entire contents have been revised and much new material added. So far as we can see it seems to be well compiled and to contain the principal points which the nurse should know.

Married.

JOSEPH SHEAFE, M.D., Riverside, Iowa, to Miss Roxey Louden, of Illinois, May 6.

EDWARD T. LAMB, M.D., Alma, Mich., to Miss Mabel Ball of Petersburg, Mich., May 1.

LEAL K. SLOTE, M.D., Constantine, Mich., to Miss Mae Wilson of Jackson, Mich., May 7.

ALBERT WINN, M.D., Harris, Iowa, to Miss Dora E. Hankins of Sioux City, Iowa, May 7.

WILLIAM L. HEARST, M.D., Cedar Falls, Iowa, to Miss Jennie E. Curtis, of Chicago, May 10.

ALBERT C. JOHNSON, M.D., Sidell, Ill., to Miss Josephine Evans, of Horace, Ill., April 30.

GEORGE A. CARHART, M.D., Pittsburg, Pa., to Miss Sara Weston Kimball of Milwaukee, Wis., May 6.

GUSTAVUS W. MOLL, M.D., Forest City, Mich., to Miss May Isabel Rideout of Oshkosh, Wis., May 7.

THOMAS A. KING, M.D., to Miss Celeste Norris, both of St. Joseph, Mo., at Kansas City, Mo., May 7.

Deaths and Obituaries.

Ida E. Richardson, M.D., one of the most prominent women physician of Philadelphia, died at the age of 57, May 9. She was a graduate of 1879 from the Woman's Medical College of Philadelphia, in which she was later instructor in practice of medicine. Dr. Richardson had a large practice limited wholly to diseases of women and children. She was one of the founders of the West Philadelphia Hospital for Women, an attending physician to the Woman's Hospital, a member of the County Medical Society, and of the American Medical Association.

John L. White, M.D. Harvard University, 1854, one of the most prominent and widely-known physicians of Illinois, died at his home in Bloomington, May 13, after a long illness, aged 69. Dr. White settled in Bloomington in 1870, and at once assumed a leading position in the profession of the state. He served for two terms as member of the legislature and was a member of the American Medical Association.

John H. Van Eman, M.D. Medical College of Ohio, Cincinnati, 1868, professor of diseases of women in Kansas City Medical College, and president of its board of directors, a veteran of the Civil war, a prominent physician and gynecologist of Kansas City and a member of the American Medical Association, died at his home in Kansas City from septicemia after an illness of less than a week, aged 62.

Marie E. Zakrzewska, M.D. Western Reserve University, Cleveland, 1856, the pioneer woman physician of Boston, one of the pioneers of the movement that enabled women to practice in various sections of the country, and the founder of the New England Hospital for Women and Children, died at her home in Boston, May 13, aged 73.

Pierson J. Pratt, M.D., a recent graduate of the University of Pennsylvania School of Medicine, died at Glen Echo, Montgomery, Md., May 4, from an overdose of morphia administered accidentally by himself. He was aged 27, and came from his home in Pennsylvania only two days before.

Allen Fowler, M.D. University of Maryland, Baltimore, 1867, one of the most prominent and beloved physicians of

Utah, where he had practiced for more than thirty years, died at Holy Cross Hospital, Salt Lake City, May 7, from pneumonia, after a short illness.

John B. **Wiley, M.D.**, died suddenly at his home in Gerardstown, W. Va., May 4, aged 74. He was a native of Virginia, and had resided in Berkley County twenty-five years. He was a graduate of the Medical College of Virginia, Richmond, in the class of 1854.

Thomas **F. Riegel, M.D.**, one of the resident physicians of St. Joseph's Hospital, Philadelphia, died, May 6, in that institution, from typhoid fever, aged 22. Deceased was graduated with honors in the class of 1901, from Jefferson Medical College.

Adolph **Schlernitzauer, M.D.** Washington University, St. Louis, 1864, a member of the American Medical Association, and a successful practitioner of Millstadt, Ill., died at his home in that place after a prolonged illness, May 8, aged 64.

Sidney **J. Lanier, M.D.** Medical College of Georgia, Augusta, 1884, formerly a practitioner of Savannah, but who was obliged to move to North Georgia a year ago on account of consumption, died at his old home in Oliver, Ga., May 9.

Alfred **Desjardins, M.D.** University of Michigan, Ann Arbor, 1877, who had practiced for twenty-five years in the Upper Peninsula of Michigan, died at St. Luke's Hospital, Marquette, after a long illness, May 7, aged 46.

John **W. Godfrey, M.D.** Central College of Physicians and Surgeons, Indianapolis, 1881, a widely-known physician of central Illinois and ex-mayor of Moweaqua, died at his home in that place, May 10.

Joseph **L. Pope, M.D.** New York University, 1855, died suddenly at his home in Bardstown, Ky., May 9, aged 72. He served on the Confederate side as a surgeon during the Civil war.

John **T. Milling, M.D.** Royal College of Surgeons, Ireland, 1843, the oldest practitioner of La Salle County, and coroner from 1888 to 1892, died at his residence in Peru, May 7, aged 83.

Daniel **W. Burdick, M.D.** Geneva (N. Y.) Medical College, 1862, died at his summer home near Syracuse, N. Y., after a prolonged illness from heart disease, May 3, aged 64.

George **W. French, M.D.** Northwestern University, Chicago, 1870, formerly of Owensboro, Ky., died at his old home in Grayville, Ill., May 4, from heart disease, aged 69.

Sidney **O. Morgan, M.D.** Western Reserve University, Cleveland, 1878, a resident of North Dakota for nearly twenty years, died recently at his home in Glen Ullin.

Campbell **Slayden, M.D.** University of Nashville, Tenn., 1852, died at his home in Dickson, Tenn., May 6. He was a member of the American Medical Association.

Z. P. **Landrum, M.D.** Medical College of Georgia, Augusta, 1851, a pioneer of Lowndes County, Miss., died suddenly at his home in Dunbar, May 5, from heart disease.

James **A. Corley, M.D.**, resident of Texas since 1850, died, May 6, at the home of his son, Dr. Laurence Corley, in Midway, Texas, after an illness of one week, aged 79.

John **H. Furman, M.D.** Medical College of the State of South Carolina, Charleston, 1845, died suddenly at his country home, Ramsey, S. C., May 6, aged 78.

Christopher **Adamson, M.D.** University of Michigan, Ann Arbor, 1899, died from erysipelas at his home in Bemidge, Minn., May 8, after a brief illness.

William **C. Harvey, M.D.** Transylvania University, Lexington, Ky., 1848, died at his home in Roanoke, Mo., May 7, after a short illness, aged 76.

Ray **Rickey, M.D.**, died from lung disease, after a long illness, May 6, at Belmont, Cal., where he was assistant physician to Dr. Alden M. Gardner.

Robert **A. Jenner, M.D.** Miami Medical College, Cincinnati, 1895, of East Dayton, Ohio, died at St. Elizabeth's Hospital, Dayton, May 12, aged 28.

Andrew **G. Grinnan, M.D.** University of Pennsylvania, Philadelphia, 1848, died at his home in Madison County, Va., May 9, aged 75.

Charles **N. Irwin, M.D.**, who had practiced in Mount Sterling, Ill., since 1850, died at his home in that place, April 25.

William **J. Burr, M.D.** Geneva (N. Y.) Medical College, 1845, died at his home in Newark Valley, N. Y., May 5.

Arvid **H. Winnermark, M.D.** Rush Medical College, Chicago, 1884, died at his home in Chicago, May 7, aged 45.

George **J. Hamilton, M.D.** Miami Medical College, Cincinnati, 1873, died at Eaton, Duval County, Fla., May 2.

Samuel **G. Ade, M.D.** University of Illinois, Chicago, 1897, died at his home in Chicago, May 11, aged 43.

Societies.

COMING MEETINGS.

American Medical Association, Saratoga Springs, N. Y., June 10 to 13.

American Pediatric Society, Boston, May 26-28, 1902.
American Laryngological Association, Boston, Mass., May 26-28, 1902.
American Gynecological Society, Atlantic City, May 27, 1902.
Connecticut Medical Society, New Haven, May 28-29, 1902.
Ohio State Medical Society, Toledo, May 28-30, 1902.
American Laryngological, Rhinological and Otological Society, Washington, D. C., June 2-4, 1902.
American Surgical Association, Albany, N. Y., June 3-5, 1902.
Louisiana State Medical Society, Shreveport, June 3-5, 1902.
Maine Medical Association, Portland, June 4-6, 1902.
South Dakota State Medical Society, Scotland, June 4-5, 1902.
Wisconsin State Medical Society, Milwaukee, June 4-6, 1902.
Rhode Island Medical Society, Providence, June 5, 1902.
Association of Military Surgeons of the United States, Washington, D. C., June 5-7, 1902.
American Orthopedic Association, Philadelphia, Pa., June 5-7, 1902.
American Academy of Medicine, Saratoga Springs, N. Y., June 7, 1902.
American Association of Life Insurance Examining Surgeons, Saratoga Springs, June 9, 1902.
National Confederation State Medical Examining and Licensing Boards, Saratoga Springs, N. Y., June 9, 1902.
Association of American Medical Colleges, Saratoga Springs, N. Y., June 9, 1902.
American Climatological Association, Los Angeles, Cal., June 9-11, 1902.
American Proctological Association, Saratoga Springs, N. Y., June 10, 1902.
Medical Society of Delaware, Newark, June 10, 1902.
Massachusetts Medical Society, Boston, Mass., June 10-11, 1902.
Medical Society of the State of North Carolina, Wilmington, June 10-14, 1902.
Colorado State Medical Society, Pueblo, June 17, 1902.
American Medico-Psychological Association, Montreal, June 17-20, 1902.
Minnesota State Medical Society, Minneapolis, June 18, 1902.
Medical Society of New Jersey, Atlantic City, June 24-26, 1902.
Washington State Medical Society, Tacoma, June 24-26, 1902.
Michigan State Medical Society, Port Huron, June 26-27, 1902.

American Gynecological Society.—The twenty-seventh annual meeting of this Society is to be held at the Hotel Rudolf, Atlantic City, N. J., May 27-29, under the presidency of Dr. Seth C. Gordon, Portland, Me.

Fulton County (Ohio) Medical Association.—This Association met at Wauseon, April 28, and elected Dr. Edwin A. Murbach, Archbold, president; Drs. S. Parker Bishop, Delta, and Thomas Blair, Lyons, vice-presidents, and Dr. Sylvanus F. Cosgrove, Swanton, secretary.

Clinton County (Ill.) Medical Society.—The annual meeting of this Society was held in Carlyle, May 6. Dr. William P. Gordon, Carlyle, was re-elected president, and Dr. Theophilus Gaffner, Trenton, re-elected vice-president. Dr. Charles H. McMahan, Carlyle, was elected secretary.

Hancock County (Ill.) Medical Society.—At the annual meeting of this Society, held in Carthage, May 5, Dr. Charles L. Ferris, Carthage, was elected president; Dr. John J. Reaburn, Denver, vice-president; Dr. Robert L. Casburn, Carthage, secretary, and Dr. James H. Callahan, Carthage, treasurer.

American Laryngological Association.—The twenty-fourth annual congress of this Association will be held in Boston Medical Library Building and Harvard Medical School, May 26, 27 and 28. Dr. John W. Farlow, president of the Association, will deliver his address at the first morning session.

Cape May County (N. J.) Medical Society.—At the annual meeting of this Society, held in Cape May, May 6, Dr. John S. Douglass, Tuckahoe, was elected president; Dr. Joseph Marshall, Tuckahoe, vice-president; Dr. Nathan A. Cohen, Wildwood, secretary, and Dr. Randolph Marshall, Tuckahoe, treasurer.

Carroll County (Ark.) Medical Society.—This Society met at Eureka Springs, May 10. Officers were elected as follows: President, Dr. Adolph Krebs, Eureka Springs; vice-president, Dr. William P. George, Berryville; secretary, Dr. V. Francis Lassayne, Eureka Springs, and treasurer, Dr. Russell G. Floyd, Eureka Springs.

Southwestern Kentucky Medical Association.—At the meeting of this Society, in Paducah, May 8, the following officers were elected: Dr. James M. Peck, Arlington, president; Drs. Benjamin P. Earle, Charleston, and Benjamin L. Hendley, Farmington, vice-presidents; Dr. Horace T. Rivers, Paducah, secretary, and Dr. James T. Reddick, Paducah, treasurer.

State Medical Society of Wisconsin.—The fifty-sixth annual meeting of this Society will be held in Milwaukee, June 4 to 6, inclusive. Dr. Walter H. Neilson, Milwaukee, will preside. The courtesies of the Bon Ami Club are tendered to the members, and clinics are to be given by Drs. Harvey W. Cushing, Baltimore, and Simon Flexner, Philadelphia.

Middlesex North District (Mass.) Medical Society.—At the annual meeting of this Society, held at Lowell, April 30, Dr. J. Arthur Gage was elected president; Dr. Burnham R. Benner, vice-president; Dr. Wyllis G. Eaton, secretary; Dr. David N. Patterson, librarian; Dr. Joe V. Meigs, Jr., treasurer, and Dr. William B. Jackson, commissioner of trials, all of Lowell.

Massachusetts Medical Society.—The one hundred and twenty-first anniversary of this Society will be celebrated, June 11, when the annual meeting will be held in the building of the Massachusetts Charitable Mechanic Association, Boston, under the presidency of Dr. Frank W. Draper, Boston. Section meetings will be held in the Medical Library, 8 The Fenway, June 10.

Southwest Missouri District Medical Association.—At the annual meeting of this Association, held in Springfield, April 17, Dr. Richard W. Paris, Morrisville, was elected president; Dr. Norman F. Terry, Springfield, vice-president; Dr. Herbert S. Hill, Springfield, recording secretary; Dr. William P. Patterson, Springfield, corresponding secretary, and Dr. Arthur B. Freeman, Joplin, treasurer.

Association of C., H. and D. Surgeons.—The surgeons of the Cincinnati, Hamilton and Dayton Railway met at Dayton, May 6, and formed a permanent organization, with the following officers: President, Dr. Wilbur R. Thompson, Troy, Ohio; vice-presidents, Drs. William S. Hog, Wellston, Ohio, and Charles H. Parsons, Rushville, Ind.; secretary, Dr. Mark Millikin, Hamilton, Ohio, and treasurer, Dr. J. Herman Thesing, Cincinnati.

Appanoose-Wayne County (Iowa) Medical Association.—The physicians of Appanoose and Wayne counties met at Centerville, May 8, and temporarily organized a bi-county medical society. Dr. William H. Earnest, Seymour, was made temporary president; Dr. Clyde E. Sawyers, Centerville, vice-president; Dr. Charles S. James, Centerville, secretary-treasurer, and Dr. Charles P. Bowen, Centerville, assistant secretary-treasurer.

Hampshire District (Mass.) Medical Society.—The annual meeting of this Society was held in Northampton, May 8, when Dr. Clarence R. Gardner, Northampton, was elected president; Dr. Albert G. Blodgett, Ware, vice-president; Dr. Arthur G. Minshall, Northampton, secretary; Dr. Alfred H. Hoadley, Northampton, treasurer; Dr. Christopher Seymour, Northampton, librarian, and Dr. Charles F. Branch, Amherst, commissioner of trials.

Randolph County (Ill.) Medical Society.—The physicians of Randolph County met at Chester, May 2, and organized a county society, with sixteen members, and the following officers: Dr. William R. MacKenzie, Chester, president; Dr. Alexis T. Telford, Menard, vice-president, and Dr. Henry C. Adderly, Chester, secretary-treasurer. Dr. John T. McAnally, Carbondale, president of the Illinois State Medical Society, was present and assisted in perfecting the organization.

Illinois State Medical Society.—The fifty-second annual meeting of this Society was held at Quincy, May 20, 21 and 22, 1902, under the presidency of Dr. John T. McAnaly, Carbondale. The Committee on Constitution and By-laws presented a new document, which was drafted in conformity with the plan of reorganization of the American Medical Association. It was thoroughly discussed, amended and adopted. The Committee on Medical Legislation presented the draft of a proposed bill for the regulation of the practice of medicine and establishing a board of medical examiners in the State of Illinois. This was likewise thoroughly discussed and recommended to the Society for adoption.

American Medical Editors' Association.—The annual meeting of this Association will convene in the Y. M. C. A. Building, Saratoga Springs, N. Y., June 9 and 10. The preliminary program includes a number of valuable papers and gives assurance that the meeting will be a most successful and interesting one. An important feature will be a symposium presenting various features of editorial and business management of medical journals. The annual dinner of the Association will be given at the Hotel Kensington on the evening of June 9. The officers of the Association are Dr. Alexander J. Stone, St. Paul, Minn., president, and Dr. Otho F. Ball, St. Louis, secretary, to whom all correspondence should be directed.

Palmetto Medical Association.—At the meeting of this Association of colored physicians of South Carolina, at Charleston, May 1, the following resolutions were adopted: *Resolved*, That we condemn the absurd, untrue and un-Christian statements made by one Dr. W. T. English, of Pittsburg, Pa., in an article published in the *Charlotte Medical Journal*, under the caption of "Shall the Negro Be Allowed to Practice Medicine?" Resolved, That a committee, consisting of J. M. Thompson, of Charleston, and Dr. C. W. Birnie, of Sumter, be appointed to prepare a suitable reply to said article. The election of officers resulted as follows: President, Dr. Nathaniel J. Kennedy, Beaufort; vice-presidents, Drs. John A. Robinson, Darlington, and John M. Thompson, Charleston; secretary, Dr. C. W. Birnie, Sumter, and treasurer, Dr. William D. Crum, Charleston.

Albany (N. Y.) Medical College Alumni Association.—At the annual meeting of this Association, the historian made a report in which he named the following alumni who served in the Spanish-American war: Drs. James F. Smith, '98, Albany; James E. Brennan, '89, deceased, Albany; Adolph V. R. Fenwick, '99, Schenectady; Garret V. Johnson, '96, Schenectady; Bernard Livingston, '99, New York City; John Van Rensselaer, '71, Washington, D. C.; James P. Kimball, '64, Washington, D. C., and Lewis T. Griffith, '97, Troy, N. Y. The following officers were then elected: President, Dr. Walter W. Scofield, Dalton, Mass.; vice-presidents, Drs. Alva E. Abrams, Hartford, Conn.; Warren C. Spalding, New York City; William B. Sabin, Watervliet, N. Y.; Thomas H. Flynn, Somerville, N. J., and Charles R. Seymour, Binghamton, N. Y.; recording secretary, Dr. J. Montgomery Mosher, Albany; corresponding secretary, Dr. Andrew MacFarlane, Albany; treasurer, Dr. Robert Babcock, Albany, and historian, Dr. Eugene E. Hinman, Albany.

KENTUCKY STATE MEDICAL SOCIETY.

Forty-Seventh Annual Meeting, held at Paducah, May 7-9, 1902.

President, T. B. Greenley, M.D., Meadow Lawn, in the Chair.

National Legislation.

The address of welcome was delivered by Hon. D. A. Yeiser, mayor of Paducah; response by Thomas Hunt Stucky, M.D., Louisville. After the reports of various committees were read and adopted, Dr. Dudley S. Reynolds, Louisville, chairman of the Committee on National Legislation, after mentioning the work done at the third annual conference of the committee of the American Medical Association at Washington, D.C., April 10, said: "It is the opinion of your committee that the permanent establishment of an authoritative representative of the medical profession should exist in Kentucky; and that a sum sufficient to meet the necessary expenses of such representative appropriated, annually, not exceeding $75 per year." This report was adopted.

Smallpox.

At the afternoon session a paper on "The Value of State Control and Vaccination in the Management of Smallpox" was read by J. N. McCormack, M.D., Bowling Green. This will appear in full in THE JOURNAL.

DR. F. L. LAPSLEY, Paris, also advocated humanized virus.

DR. W. W. RICHMOND, Clinton, had seen a small epidemic of smallpox originate from a case of so-called Cuban itch.

DR. J. G. BROOKS, Paducah, had seen the contagion spread prior to development of the pustular stage, and did not agree with the essayist as to the innocuousness of such cases.

DR. D. S. REYNOLDS, Louisville, had seen the mildest cases of varicella give rise to violent variola. He recommends humanized vaccine. He has seen chancroidal sores produced by bovine virus. There is danger of introducing other microorganisms, for instance the staphylococcus. Glycerinated vaccine is objectionable, but it depends altogether upon method of introduction.

DR. J. A. LEWIS, Georgetown, said he knew some physicians who did not believe in vaccination, whose remarks had considerable influence with the laity, and had kept them from being vaccinated. He advised against vaccination upon the leg, as he had seen one fatal case of this nature.

DR. ARCH DIXON, Henderson, referred to the lack of interest on part of the fiscal courts in attempting to stamp out smallpox, or in assisting physicians and health boards in doing so.

DR. GEO. ORSBORN, Sebree, had seen eight pregnant women with smallpox in recent epidemic, all of whom aborted. The disease resembled pneumonia in first stages and some difficulty had been experienced in diagnosis.

DRS. FRANK BOYD, Paducah; T. J. SHOEMAKER, Morganfield; C. C. GODSHAW, Louisville; and C. AUSTIN, Bagdad, took part in the discussion.

DR. J. N. MCCORMACK, in closing the discussion, said he did not wish to be understood as condemning bovine virus, but following its use local and constitutional disturbances were apt to be more severe and immunity not so great as that following humanized virus, therefore the latter was preferable. Vaccination can most certainly be enforced under the laws of this state.

"The Obligation of Society to the Physician" was read by DR. ARCH DIXON, Henderson.

Fracture and Malpractice Suits.

DR. JOHN A. LEWIS, Georgetown, read "The Treatment of Fractures and Dislocations in Relation to Suits for Malpractice," and concluded with the following summary: "1. Do not undertake to practice surgery unless you have some training and skill. 2. If you undertake it, leave nothing undone to secure success, from the date of your first visit to your last, when you remove the dressing. 3. Never guarantee results; let it be clearly understood that failure is not impossible even in uncomplicated cases after the most faithful and skilful treatment. 4. Make your first examination just as carefully and thoroughly as possible under the circumstances; make a plain and truthful statement as to result of your examination of trying nature of injury, etc., to the family, guarding your prognosis well. Make this statement if possible in the presence of some honest physician or, better still, some intelligent layman. 5. Let the patient and his family feel that in calling you it is presupposed that they know your ability in work in this line; if they are unwilling to assume the risk of final results, then they ought to call someone else. 6. After your first examination, if you are in doubt as to the diagnosis, or as to plan of treatment, call a consulting physician at once. 7. In the treatment of charity patients and dead-beats be especially on guard to protect yourself. 8. Remember the law holds you to the same accountability in the treatment of charity patients as in treatment of the rich. 9. Use only approved methods of treatment, leave the experimental treatment to the hospitals. 10. Treat your brother physician exactly as you would have him treat you; never by word, or act, or look, lend countenance to the suggestion of a damage suit, it matters not whether the physician be your personal friend or not. Express no opinion as to an unsuccessful result in any case treated by another physician, unless he be present. 11. If in spite of your best efforts to avoid a suit, one comes, never compromise or pay hush money; fight to the death. Every physician should always stand ready to go to the assistance of his brother physician, with his time and money if necessary, in defending one of these suits for malpractice. 12. In closing, it may not be out of place for me to say that perhaps the wisest solution of the whole matter might be for each of you to "lay up treasures in heaven, where moth and rust do not corrupt and thieves do not break through and steal."

DR. D. S. REYNOLDS, Louisville, said all the law required was that the surgeon should be competent to do what he undertook. He related several cases, however, where juries had awarded damages (in some cases punitive damages) against surgeons although it did not appear that the surgeons were at fault.

DR. F. L. LAPSLEY, Paris, asked if the surgeon were not still legally responsible, even after he further refused to treat a case, because of refusal on part of the patient to comply with the wishes of the surgeon in regard to certain treatment.

DR. J. A. LEWIS, in closing the discussion, stated that in twelve months after the patient was discharged (in Kentucky) the legal responsibility of the physician or surgeon ceased. But so long as the case is under the surgeon's observation he is held responsible. The speaker again emphasized the importance of making these examinations under anesthesia, unless there exists some valid contraindication.

The president's annual address was read in the evening at the Palmer House, and was followed by an elaborate banquet given by the committee on entertainment in honor of the Kentucky State Medical Society.

Puerperal Eclampsia.

The first paper on May 8 was read by DR. J. T. REDDICK, Paducah, on this subject. After a general review of symptoms and etiology, the author reported two interesting cases recently seen, both successfully delivered with forceps, followed by recovery. In one case he had removed an ovarian cystoma in the ninth week of pregnancy. Believing the condition due to a general toxemia, he advised free elimination, calomel, veratrum viride, morphin, chloral, digitalis, inhalations of chloroform, etc.

DR. W. B. GOSSETT, Louisville, called attention to enlargement of the thyroid gland in eclampsia, and suggested that the thyroid secretion might be the treatment nature had provided to overcome the poisonous toxins.

DR. E. SPEIDEL, Louisville, referred to importance of prophylactic treatment; advised elimination by calomel and injection of hot saline solution into colon. Urea and not albumin is the important factor in urine of pregnant women. A diet of buttermilk is better than sweet milk.

The next paper was read by WALKER B. GOSSETT, M.D., Louisville, on the subject of "Version."

The Medical Treatment of Cholelithiasis.

A paper on this subject was read by R. ALEXANDER BATE, M.D., Louisville. The author thought gallstones due to constitutional dyscrasia. Indications for treatment are, 1, prevention of formation of calculi; 2, control of symptoms and expulsion of calculi when formed. It is not claimed that all cases of cholelithiasis can be cured by medical means, but only a small proportion of cases ever require surgical intervention. He emphasized the fact that internal medication, either alone or combined with surgical measures, must be instituted before a radical cure could result.

The Gall-Bladder.

DR. J. LIVELY JOHNSON, Louisville, discussed diagnosis and treatment of gallstones. The medical treatment was mentioned only to call attention to its utter inability to remove gallstones either by expulsion or dissolving. Specific diet is unimportant. Operation is indicated as soon as diagnosis is made.

The Surgical Treatment of Cholelithiasis.

DR. DAVID BARROW, Lexington, read this paper. Surgical treatment should be resorted to where, 1, the colics are frequent, or the suffering is severe, and of several days' duration; 2, where there is evidence of cystic or common duct obstruction, not positively due to malignant disease; 3, in some cases of positive malignancy with the hope of lessening pain and discomfort, and to remove the stones frequently present in these cases, or to do a cholecystenterostomy for the relief of cholemia; 4, in acute infection of the gall-passages, cholecystitis and cholangitis; 5, in chronic infection of the gall-passages, as manifested by irregular chilliness and evening temperature, with loss of flesh, weakness and partial invalidism, with previous history of indigestion and colic; 6, in a chronically distended gall-bladder large enough to be felt through the abdominal parietes; 7, in intestinal obstruction due to gallstones in the intestine or to inflammation caused by gallstones; 8, in some obscure inflammation pointing to trouble in the upper right side of the abdominal cavity. Results from primary operation are usually satisfactory. If secondary operation becomes necessary, the gall-bladder should be removed where possible.

The Treatment of Biliary Colic.

The next paper was read by DR. EDWARD SPEIDEL, Louisville. The author laid stress upon colon injections of hot saline solution.

DR. F. C. WILSON, Louisville, said, unquestionably some cases could be relieved by medical means, while others required the surgeon's knife.

DR. W. A. QUINN, Lexington, thought the medical treatment of gallstones a delusion.

DR. T. H. STUCKY, Louisville, thought perhaps the proposition should be reversed, i. e., instead of the medical man turning all these cases of gallstones over to the surgeon, the surgeon should refer such cases to the general practitioner. He believed, however, that it was absolutely impossible to draw the line where the medical man should leave off and the surgeon commence. He emphasized the efficacy of high rectal enemata of hot saline solution.

DR. A. T. MCCORMACK, Bowling Green, said the treatment in many cases of gallstones should be purely medical, that they never required surgical intervention; on the other hand, there were many cases distinctly surgical, and operation should be done promptly.

DR. J. V. PREWITT, West Point, referred to a case in which manipulation under chloroform had resulted in passage of gallstones by the bowel and complete recovery.

DR. LOUIS FRANK, Louisville, said that not infrequently there was adhesion between the gall-bladder and duodenum, or some other part of the intestine, followed by ulceration and perforation, allowing gallstones to pass into the bowel, and the physician attributed the passage of such stones to medical treatment. He emphasized the importance of surgical intervention and drainage as soon as diagnosis is made. Gallstones are undoubtedly due to bacterial infection.

DR. A. SCHACHNER, Louisville, said, as soon as diagnosis is made, surgery should be resorted to for removal of the gallstones and establishment of drainage.

Nasal Obstructions.

At the afternoon session, May 8, DR. DUDLEY S. REYNOLDS, Louisville, read a paper on this subject, and reported illustrative cases resulting from foreign bodies, polypi, etc., with treatment instituted. He uses adrenalin for reduction of swelling of nasal mucous membrane in order to make a differential diagnosis between abnormal bone growths, ordinary neoplasms, foreign bodies, pharyngeal growths, etc.

DR. WM. CHEATHAM, Louisville, spoke of the dangers of secondary hemorrhage following use of adrenalin and cocain in the nasal passages. Where obstruction due to engorged tissues, he believed constitutional treatment important. Local treatment with cautery is not effective in many cases.

DR. M. F. COOMES, Louisville, thought secondary hemorrhage following use of adrenalin and cocain in the nasal passages was due to carelessness on part of the physician, and referred to two such cases.

Chancre of the Tonsils.

DR. WILLIAM CHEATHAM, Louisville, reported seven such cases and thought many cases were overlooked.

The Mammary Gland—A Plea in Equity.

The next paper was read by DR. C. C. LEWIS, Owensboro, urging that physicians should educate mothers to nurse their infants at the breast wherever possible, rather than to feed them upon any of the artificial foods, which is an evil that is constantly growing and should be checked.

Suggestion: Factory Surgery: X-Rays.

DR. ANNA G. SEDAM, Covington, read a paper on "Suggestive Therapeutics, or Psychologic Medicine."

"The Hand in Factory Surgery" was the subject of a paper by DR. C. C. GODSHAW, Louisville.

The next paper, "The X-Rays in Surgery," was by DR. A. T. MCCORMACK, Bowling Green.

DR. J. B. KINNAIRD, Lancaster, followed with "The Therapeutics of the X-Rays."

Medical Management of Appendicitis.

This paper was read by DR. JOSEPH W. IRWIN, Louisville. The author said that in the last 29 years he had seen and treated upward of 150 primary cases of what was then known as perityphlitis, later and now as appendicitis, without having to resort to surgical means, and had to record but two relapses, both patients surviving, and a single death.

Intestinal Obstruction, with Report of Cases.

DR. AUGUST SCHACHNER, Louisville, reported several interesting and instructive cases and advised use of the needle and thread versus mechanical devices.

Election of Officers.

On the third day, May 9, the following officers were elected: President, Dr. W. W. Richmond, Clinton; vice-presidents, Drs. C. C. Lewis, Owensboro, and J. D. Wells, Cynthiana; permanent secretary and treasurer, Dr. Steele Bailey, Stanford; librarian, Dr. F. L. Lapsley, Paris; delegates to the American Medical Association, Drs. J. N. McCormack, Bowling Green, (two years), and Thomas Hunt Stucky, Louisville (one year).

The New Constitution.

The following report of committee on revision of the Constitution was read and adopted by unanimous vote:

"The committee composed of one member from each of the counties represented at this meeting of the Kentucky State Medical Society, having with great care and patience read and considered the instrument submitted to them, beg leave to recommend its adoption by the Kentucky State Medical Society. Your committee arrived at this conclusion after due deliberation, and by unanimous vote. (Signed) John G. Cecil, M.D., Chairman."

Concluding Papers.

DR. H. T. RIVERS, Paducah, read a paper entitled "Continued Fevers of Southwestern Kentucky."

DR. GEORGE R. RAU, Louisville, presented a paper on the subject of "Paralytic Dementia."

DR. J. N. MCCORMACK, Bowling Green, escorted the newly elected president to the chair, and Dr. Richmond then delivered an appropriate and impressive address.

DR. JOHN A. LEWIS, Georgetown, was selected to deliver the annual address in surgery, and DR. JOHN G. CECIL, Louisville, was selected to deliver the annual address in medicine, at the next meeting. The Society adjourned to meet in Louisville in May, 1903.

TORONTO CLINICAL SOCIETY.

The Final Meeting of the Session 1901-1902, held May 7, 1902.

Fatal Membranous Glossitis.

DR. A. J. HARRINGTON reported an unusual case of membranous glossitis, of which he stated he could find no trace in the literature. The specimen was presented. The condition occurred in an infant of eleven months of age, a fine, healthy, robust child. It had measles in March, 1902. On April 8 the whole cast of the tongue exfoliated, and the system of the child was thoroughly saturated with sepsis. The child died the following morning.

Epidemic of Mumps.

DR. ALLAN BAINES reported a very severe case of metrorrhagia in a young girl of sixteen, following mumps. This brought up a discussion on mumps, of which there has been an epidemic in Toronto during the past two or three months. Several members referred to cases of the disease confined to the submaxillary glands alone. Dr. Fred. Fenton reported favorably on the use of urotropin in pyuria, having found it especially valuable in old men with enlarged prostates and residual urine. Dr. C. J. O. C. Hastings reported three cases of myxomatous degeneration of the villi of the chorion which he had had in his practice. All recovered.

Election of Officers.

The following were the officers elected for the ensuing year: President, Dr. E. E. King; vice-president, Dr. George McDonagh; corresponding secretary, Dr. W. J. McCollum; recording secretary, Dr. George Elliott; treasurer, Dr. Geoffrey Boyd; executive committee, Drs. J. F. W. Ross, J. Orlando Orr, H. A. Bruce, H. C. Parsons and J. T. Fotheringham. On the evening of April 15, the annual dinner of the society was held at the Toronto Club, and a most enjoyable time spent.

NORTH BRANCH OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held April 17, 1902.

The President, Dr. A. M. Eaton, in the Chair.

Microscopic Diagnosis of the Abnormalities of the Blood.

DR. W. WAYNE BABCOCK read this paper and stated that there were four things to be considered in this connection: 1, the amount of hemoglobin; 2, the number of red blood corpuscles; 3, the number of white corpuscles; and 4, the determination, by a method of staining and microscopic examination, of the shape and quality of the corpuscles. The estimation of the hemoglobin by the use of the Talquist scale was thought to give sufficiently correct results for general purposes; where more accurate results were required the Gower's instrument was recommended. For general use in estimating the corpuscular richness of the blood the Oliver instrument was recommended, and when a more accurate result is desired, of course, recourse will of necessity be had to one of the counting methods. Dr. Babcock gave some of the details of technic and illustrated the use of the knowledge to be gained by these observations.

The Use of Simple Microscopic Methods by the General Practitioner.

DR. ROBERT L. PITFIELD urged the more general use of the microscope to confirm clinical diagnosis, especial attention being directed to tubercular involvement, nephritis, diphtheria and venereal disease. Numerous cases were cited where the diagnosis of tuberculosis was established solely by the microscope. The reader expressed the opinion that about 72 per cent. of the cases of diphtheria and tonsillitis could be correctly diagnosed by the examination of a simple smear from the throat discharge. While the use of the culture was recognized as a more certain method, it was thought that the latter procedure was beyond the reach of the average practitioner. The value of the examination of stools was also commented upon.

Discussion.

The discussion was opened by Dr. Judson Daland, who believed that Fleischl's hemometer, modified by the little slit cap, was the best method of estimating the amount of hemoglobin. Dr. Daland had given considerable attention to the examination of fresh blood and did not feel that this was practiced to as great an extent in this country as might be desirable. In his opinion, much valuable information could be obtained by observing the manner in which crenation and rouleauxing take place and the manner in which the fibrin is formed. It is possible to conduct the examination for from 25 to 30 minutes before crenation interferes. The speaker cited a case which had recently come under his observation presenting all the physical symptoms of pulmonary tuberculosis, but in which the sputum, although frequently examined by different observers, showed no tubercle bacilli. The case eventually proved to be one of aortic aneurysm.

DR. FREDERICK A. PACKARD remarked upon the contrast between the present laboratory methods and those in vogue about twenty years ago. Attention was directed to the importance of the examination of the stools; especially was this thought to be important in cases of children who were supposed to be suffering with worms. The liability of error in making the diagnosis of Bright's disease solely upon the presence of albumin and casts in the urine was commented upon and the importance of considering these factors in conjunction with the clinical symptoms was remarked. Where albumin is persistently present in the evening urine and absent or present in a very much smaller amount in the morning specimen, it was thought to suggest either stone in the kidney or movable kidney.

DR. JOSEPH SAILER emphasized the importance of microscopic examinations in differentiating diseases due to the colon group of bacteria and attention was called to the regularity with which cholera is diagnosed by this method in the Orient.

DR. AUGUSTUS A. ESHNER considered that in cases where albumin and casts are present in a patient's urine, a distinction should be made between the cases in which they are constantly present and those in which the condition is transitory; in the latter instance he feels that but little importance should be attached thereto. In regard to the estimation of the corpuscles in the blood, the speaker stated that his experience had been principally with the Thoma-Zeiss instrument. For ordinary purposes he considered that not only can one estimate the number of red cells, but can also form an approximate idea of the number of white corpuscles by the use of this instrument. In cases where diphtheria is suspected, the speaker stated that he believed it was just as important to examine the nasal discharges as it was to examine the exudates from the throat, as in his opinion nasal diphtheria is not so rare as is sometimes supposed.

DR. M. H. FUSSELL spoke of the great value to be derived by the general practitioner from the examination of the urine of his patients, as in his opinion many cases of Bright's disease and other affections are not recognized until it is practically too late to be of any service to the patient, when the physician depends entirely upon the clinical symptoms. The sputum should be examined in every chronic cough, even although the physical signs of tuberculosis did not happen to be present. In the examination of the exudates from the throat for the diphtheria bacillus, he felt that cultures are far more accurate than the microscopic examination of a simple smear of the discharge on a cover glass, and he does not feel that it is safe to exclude the disease even although a negative result is obtained by the latter method.

CALIFORNIA ACADEMY OF MEDICINE.

Monthly Meeting, held April 29, 1902.

DR. D. W. MONTGOMERY in the Chair.

Fracture of Vertebra.

DR. T. W. HUNTINGTON presented a case of fracture of a spinal vertebra treated on the expectant plan. There was a slight prominence, a slight deviation and some rigidity; no paralysis; no serious disturbance of functions of rectum or bladder; some anesthesia; patellar reflexes were normal. Extension was used, and at the end of forty-eight hours evidence of displacement had disappeared. He also gave history of another case with similar symptoms and treatment, who was wearing at present a plaster cast. Both patients had done well.

New Method of Prostatectomy.

DR. GEORGE GOODFELLOW presented a paper on "Perineal Prostatectomy," giving a technic which he believed he was the first to deliberately plan and execute. With the patient in the lithotomy position, the bladder being empty or full as the case may be, a lithotomy staff is introduced, the legs then elevated somewhat, a median incision from the base of the scrotum to the margin of the anus is made and carried to the membranous urethra, which is entered with a lithotomy knife and the opening extended into the bladder. The finger is then introduced, the staff removed and the legs, which were somewhat elevated, are flexed on the abdomen and thorax to as great an extent as possible and with the opposing hand over the hypogastrium the bladder is depressed and the enucleation, beginning at the beak of the prostate below and working upward next to the bladder, is carried on, the time consumed for complete enucleation rarely being over five minutes, the resulting hemorrhage virtually nothing. The gland may be removed entire or lobe by lobe. If the bladder has been full of pus, sometimes it was washed out. No drainage of any kind was made, the perineal incision sufficing. In his earlier cases the practice was to pass straight sounds through the perineal wound into the bladder every other day for a week or more to keep free drainage, and in any complicated case such a course might be adopted; but of late it had not been found needful. In all recent cases no instrumentation of any kind has been permitted, neither irrigation, passage of sounds nor catheters, and all had done as well or better than under the older process. The points he wished expressly emphasized were the position of the patient, and the incision into the bladder; to these he thought were due his unvarying success.

DR. D. W. MONTGOMERY presented a case of epithelioma of the upper lip, which the *x*-ray treatment failed to check. Dr. H. M. Sherman therefore removed the entire upper lip, by incisions which extended directly upward from the corners of the mouth and then were joined by a horizontal incision close to the alæ and septum of the nose. Flaps consisting of all the tissues of the cheek were brought together in the place of the removed lip. At present the lip is a perfectly serviceable one and is not unsightly.

ASSOCIATION OF AMERICAN PHYSICIANS.

Seventeenth Annual Meeting, held in Washington, D. C., April 29 and 30, 1902.

President, Dr. J. C. Wilson, Philadelphia, in the Chair.

(Concluded from p. 1325.)

Splenic Anemia and Its Varieties.

DR. OSLER, in this paper, discussed the general question of splenic anemias, but paid particular attention to one group of cases which he thought could be separated from the general class as a distinct type. The particular features of this group are the chronicity of the anemia and splenic enlargement. Secondly, the absence of any enlargement of the lymph glands. Thirdly, the blood changes are those of chloro-anemia, the red cells in some cases being above 4,000,000, while the hemoglobin is as low as 30 per cent. and in some of the cases there is an exceedingly low leucocytic count. Fourthly, pigmentation of the skin is sometimes a characteristic feature, being mottled in some cases and in others resembling argyria Fifthly, in the late stages the liver is involved and cirrhosis has been found postmortem.

Dr. Osler thought that this group with the symptoms referred to was quite distinct from the cases of pernicious anemia with enlarged spleen, from certain cases of cirrhosis of the liver, particularly syphilitic forms, and from Hodgkin's disease. The name of splenic anemia was used simply for the want of a better one. Treatment of these cases is not very satisfactory. There may be improvement for a time and the red cells increase in number, but the hemoglobin remains low. The nature of the disease is unknown. Whether due to the spleen or not is unsettled, but some cases have recovered after removal of the spleen. With the aid of other members of the association Dr. Osler had collected 42 cases of this character.

DR. MUSSER opened the discussion and reported two cases of this character. He did not believe they should be considered as a separate disease.

DR. BILLINGS reported two cases, one of which followed a severe hemorrhage.

DR. CABBOTT said that he had seen eight cases that followed the type presented by Dr. Osler, but he was not convinced that these cases should be grouped under a separate special heading.

DR. STYLES of the Agricultural Department asked if any of these cases had been subjected to intestinal examinations to exclude the presence of the strongyloides or the uncinaria americanus—both of which have been found in cases of anemia with enlarged spleen.

DR. H. F. VICKERY reported "A Case of Albumosuria Associated with Pernicious Anemia."

A Report of the Cases of Thermic Fever Treated at the Pennsylvania Hospital in the Summer of 1901.

DR. M. J. LEWIS read this paper. There were 91 cases of thermic fever seen at the Pennsylvania Hospital during the hot weather of July, 1901, which showed a temperature of 100 degrees F. and over. There were 31 females and 60 males. The temperature of the patients varied from 100 to 113 degrees, no patient with a temperature of under 106 dying and no case with a temperature of 111 or more recovering. The cases with very high temperatures usually showed convulsions with retraction of the head. Examinations of the urine showed nothing special beyond the presence of slight amounts of albumin and sometimes casts. Blood examinations were made in seventeen cases, but with such varying results that it was impossible to draw any valuable conclusions. Milder cases were treated with rest in a cool portion of the ward, the application of an ice cap and stimulants. The more severe cases were treated in a large open tent containing two large electric fans and movable bath-tubs. In a few cases the hose was employed to direct a stream of water from a distance over the patient's body. Rubbing the body with ice seemed to be easier and more satisfactory than the use of the tub. The advisability of bleeding as a routine practice was discountenanced and the intravenous injection of normal saline solution strongly endorsed.

In the discussion Drs. Billings, Musser and Packard all related their experiences during the past summer and advocated the use of saline injections.

Hemolymph Glands.

At the evening session, in the absence of Drs. Dock and Warthin, Dr. Flexner presented their lantern slide demonstration of the hemolymph glands. Dr. Warthin found these glands extremely numerous, but difficult to distinguish from ordinary lymph glands because after death the blood leaves them to a great extent. He estimates that in the human subject they bear about the ratio of one to ten ordinary lymph glands. Dr. Flexner believed that the most valuable part of his work, however, was to be found in the consideration of the histologic structure of these glands. He separates them into two classes, one following the general type of the spleen and for the other the bone marrow might be taken as the type. They all contain structures similar to the ordinary lymph glands with the additional features peculiarly their own. The trabecular spaces were filled with blood and throughout the whole of the gland there is a reticulum containing spaces lined with spindle cells and filled with blood. The glandular areas resemble the Malpighian bodies of the spleen except that only very rarely can a vessel be found comparable to the branches of the central splenic artery. He was not able to find evidences of blood formation in these glands, but on the contrary, found evidences of blood destruction. In the marrow type he found in addition to these peculiar appearances the presence of fat globules or spaces from which fat had been absorbed. He thinks they have nothing to do with blood formation under normal conditions, but that under pathologic conditions they may act quite vigorously to assist in the formation of blood.

DR. C. S. BOND exhibited lantern slides showing the presence of mytosis in the circulating blood.

DR. FRANK BILLINGS gave a demonstration of sections showing the anguillula aceti obtained from a specimen of urine.

DR. JAMES EWING exhibited some slides showing the blood changes in some smallpox cases. He had been studying particularly the development of the so-called vaccine bodies. He was inclined to think these bodies are always the result of the fragmentation of red corpuscles.

Pleurisy with Effusion.

At the Wednesday morning session the first paper presented was that by Dr. Richard C. Cabbott on "The Prognosis of Pleurisy with Serous Effusion." He had carefully sought out the three hundred patients treated for serous pleurisy at the Massachusetts General Hospital during two decades. He succeeded in finding either by letter or a personal visit 152 of these patients who had been discharged apparently recovered. Considering their conditions when treated and their progress after dismissal from the hospital he concluded, first, that 80 per cent. of the cases of uncomplicated serous pleurisy are in good health after 5 years or more (more than half of his cases had been followed more than 10 years); second, 90 per cent. are apparently in full health at the end of from 2 to 5 years—that is, the pleurisy has no immediate connection with any other affection: third, 15 per cent. of the cases have sooner or later developed tuberculosis, but in only 3 per cent. has this manifested itself within 2 years of the date of pleural effusion; fourth, the type of tuberculosis was, as a rule, mild and of slow course; nevertheless, a very rapid form of tuberculosis may develop many years after the pleurisy. Of those who develop tuberculosis more than two-thirds presented tuberculous family histories.

His figures tended to prove that whether pleurisy means tuberculosis or not the outlook is bright provided no family

history of tuberculosis clouds it. If pleurisy means tuberculosis it is a very mild form and usually yields to proper treatment.

DR. OSLER expressed the thanks of the association to Dr. Cabbott for his great labor in securing such statistics and said that they proved that pleurisy with effusion is not such a grave matter as it has always been considered.

DR. HARRIS of Manchester, England, stated that the practice in England was based upon figures much more unfavorable than these. Life insurance companies there, as a rule, declined to accept any applicant who has had pleurisy within five years. He thought these rules were probably too strict and that Dr. Cabbott's figures would cause a reconsideration of the prognosis in this disease.

DR. JACOBI stated in support of Dr. Cabbott's figures the fact that it is so very common when examining healthy patients, or patients who complain of some other trouble, to find the evidences of an old pleurisy.

Empyema.

DR. CHARLES F. WITHINGTON read a paper entitled "A Clinical Study of a Hundred and Thirty-five Cases of Empyema based Upon the Bacteriologic Findings in the Exudate."

DR. OSLER asked whether the author had found any great increase in the number of cases of pyemia following pneumonia during the past five years. It was reported to be so by Dr. White of Guy's Hospital and Dr. Osler had had the same experience at the Hopkins.

Dr. Withington replied in the affirmative.

Spontaneous Non-tuberculous Pneumothorax.

DR. M. H. FUSSELL gave the definition as "a pneumothorax occurring suddenly in healthy individuals, without the cause being discoverable by physical examination or by the history of the case and in which there is no formation of liquid." Dr. Fussell reported in detail the histories of two cases and reviewed the literature of the subject. He finds that aspiration is a certain and safe means of relief and should be resorted to in severe or prolonged attacks. He believes this form of pneumothorax to be benign since all but one of the reported cases have recovered.

Drs. Kinnicutt, Cohen, Shattuck, Janeway, Peabody, Osler and Billings reported cases.

Some Pulsations in the Chest Other Than Aneurysmal.

DR. A. R. EDWARDS reported a case of pernicious anemia in which there was a diffuse expansile pulsation in the chest and upper abdomen and a second case in which there was a sarcoma of the lungs with pulsation. The first case presented many symptoms of aneurysm, but autopsy examination failed to disclose any anatomic explanation for these symptoms.

DR. LAFLEURE remarked that within the past two months he had had a similar experience; the case was one of secondary anemia and the phenomena those usual for aneurysm, but the autopsy showed an ulceration of the stomach which had not been previously recognized.

Healed Ulcerative Endocarditis.

DR. J. B. HERRICK stated that we might, *a priori*, expect occasional recovery in ulcerative endocarditis and that a review of the literature shows that such occasional recoveries do occur.

The Condition of the Heart in Pregnancy.

DR. ALFRED STENGEL read a paper to show that the supposed hypertrophy of the heart is in most instances due simply to the dislocation of the apex. He thought the murmur so frequently heard in the later months is due to distension of the right heart and the conus arteriosis. He could find no change in the blood pressure before and immediately after delivery.

DR. F. P. KINNICUTT read "A Case of Pancreatic Lithiasis with Recovery of the Characteristic Calculi from the Stools, Followed by an Attack of Cholelithiasis a year later with the Passage of Characteristic Biliary Calculi."

DR. S. SOLIS COHEN read "A Further Contribution to the Subject of Vasomotor Ataxia."

DR. HENRY JACKSON read: "Intestinal Hemorrhage; Its Relation to Duodenal Ulcer."

Prognosis and Treatment of Tuberculous Peritonitis.

DR. F. C. SHATTUCK presented an analysis of 98 cases of tubercular peritonitis treated in the Massachusetts General Hospital between 1889 and 1900, with special reference to the treatment. This was divided into purely medical treatment, tapping for the relief of effusion and surgical measures. Treatment by surgical means seemed to secure better results than by purely medical remedies.

Some Clinical Manifestations of Hepatic Cirrhosis in the Light of Eighty Autopsies.

DR. G. G. SEARS said persistent jaundice and hemorrhage from the digestive tract seldom occurred until the connective tissue formation had well advanced. Hemorrhage was found to be almost invariably due to some gross lesion which in most cases was an esophageal varix. Ascites was also a late symptom and its early appearance was usually due to other conditions than simple portal obstruction. Degenerative changes in the heart and probably in the vascular system were contributing factors. Continuous fever was never found except with complications. No evidence was found to show that the course of the disease is not always progressive. Operative treatment is indicated in a very small percentage of cases and it is doubtful whether it is any more effective than early and persistent tapping.

Clinical Manifestations of the Early Stage of Cirrhosis of the Liver.

DR. FRANK BILLINGS presented an elaborate consideration of this subject with the presentation of cases to illustrate the points brought out. It will appear in this journal.

Experimental Glycosuria.

DR. C. A. HERTER read a paper on "Experimental Glycosuria from Adrenalin Chlorid and Its Relation to other Forms of Glycosuria dependent on the action of Reducing Substances on the Cells of the Pancreas." Evidence was brought forth to show that many and probably most forms of glycosuria and diabetes are due to the action of substances or conditions which interfere with normal oxidations in the cells of the pancreas.

Election of Officers.

The meeting closed with the election of the following officers for the ensuing year:

President, Dr. James Stewart; vice-president, Dr. W. T. Councilman; secretary, Dr. Henry Hunn; treasurer, Dr. J. P. Crozer Griffith; recorder, Dr. S. Solis Cohen; councillors, Drs. Chas. G. Stockton and Walter Reed.

THE CHICAGO LARYNGOLOGICAL AND CLIMATOLOGICAL ASSOCIATION.

Regular Meeting, held April 21, 1902.

The President, Dr. Moreau R. Brown, in the chair.

(Concluded from p. 1324.)

Fibro-sarcoma of the Soft Palate and Tonsil, with Exhibition of Pathologic Specimen.

DR. CHARLES M. ROBERTSON narrated the case of C. S., a farmer by occupation, aged 62, who, while picking his teeth with a straw, pricked the left tonsil, causing only slight pain. In a few days he noticed a small swelling above the left tonsil, which increased rapidly in size till the end of eight weeks, when he presented himself for relief. At this time the patient experienced great difficulty in breathing, and it was almost impossible to swallow food. Upon examination, a large tumor was found occupying the left palatal arch, well down to its base, involving the tonsil and side of the pharynx as far as the epiglottis, and up behind the edge of the hard palate as far as the left Eustachian tube. It extended forward into the mouth to within one inch of the incisor teeth. The growth was smooth in contour, lighter in color than the surrounding tissues, and firm and elastic to the touch. Under cocain, a piece of the growth was removed for microscopic examination and pronounced fibro-sarcoma. The following week the growth was removed under chloroform anesthesia. It was found to be en-

capsulated, and on this account a favorable prognosis was made. In looking over the literature I find some 25 cases reported of sarcoma of the soft palate and 45 additional cases of sarcoma, where the soft palate and tonsil or tonsil alone were involved. In nearly all the cases the growth was removed by external operation and in these cases recurrence was frequent, whereas the encapsulated growths removed by the mouth were not so prone to recurrence. The case under consideration has as yet shown no signs of new growth, twenty months having elapsed, and therefore I feel justified in reporting it as a cure.

DR. E. FLETCHER INGALS recalled the case of a boy of 13, upon whom he operated and removed a fibro-sarcoma in 1883, through the natural passages. The tumor soon showed a tendency to recurrence, but as the patient was in the city alone and fell into bad company, I was obliged to send him to his home in a distant state. He came to see me again sixteen years afterward for pain in the chest, apparently of rheumatic origin. He stated that after returning to his home the first time the tumor had grown so as to cause complete nasal obstruction, and great prominence of the right cheek, and to destroy sight in right eye, but after a few years it had almost completely disappeared by atrophy.

Carcinoma of the Epiglottis.

DR. A. M. CORWIN gave the history of a man 66 years old, whose present wife has pulmonary tuberculosis, which has been manifested in its various stages even to marked cavity formation. Her brother, who died of tuberculosis, resided at this patient's home during a long illness. The patient has been of robust health up to recent years. There is no history or evidence of syphilis. His family history is excellent. About three months ago he consulted the writer for an uneasiness which he had noticed for three months in the lower part of the pharynx, a slight feeling of fulness, stiffness and increased secretion, which required frequent clearing of the throat. There was little or no pain except some dysphagia which began about six weeks before. His voice was clear and he had no cough. Examination showed nose and fauces normal. The epiglottis was slightly congested, but not swollen or otherwise abnormal except along its left margin from tip to base. Here there was a proliferative ulcerated surface, which projected above the normal surface of the epiglottis as a cauliflower-like formation covered by a grayish muco-purulent secretion. When this was removed by swab the surface was seen to be granular, though it did not bleed except after considerable violence. The side of the tongue and the adjacent wall of the pharynx, which were most of the time in contact with the growth, presented a similar granular ulcerated surface, which also involved the aryepiglottic and pharyngo-epiglottic folds. Considering the character of the morbid area and the extent of the surface involved, the absence of swelling of the neighboring tissues and the absence of glandular enlargement was noteworthy. The larynx and trachea were otherwise normal. Examination of the chest showed lungs normal and heart substantially so. Thorough examination of the sputum and scrapings of the epiglottis show absence of tubercle bacilli or other significant morbid elements. The local appearance, the duration, the absence of pain and lung and sputum findings, lack of emaciation, normal temperature and pulse ruled out tuberculosis. The administration of iodids was continued several weeks without benefiting his throat in the least. The case is therefore one of malignant trouble (carcinoma). A small piece from the diseased area was so small as to be unsatisfactory in demonstrating carcinoma tissue. There seems to have been slightly more rapid degeneration of the point of removal so that I have considered that nothing would be gained by further antimortem histologic investigations because of the contraindications to radical operation in the case, because of the extent of involvement, the age of the patient, his arteriosclerosis, his chronic nephritis and epilepsy. A good specimen will be obtained postmortem. The progress in the last three months has been slow, and it is about an eighth worse than when I first saw him, two and a half months ago. He has been upon a forced milk diet with starchy foods judiciously chosen, and nitrogenous food avoided. It is somewhat remarkable that he has retained his weight. Local measures have been chiefly directed to cleanliness.

DR. OTTO J. STEIN narrated a case of leukoplakia buccalis and epithelioma treated for four months by *x*-rays with no benefit.

Resection of the Superior Maxilla.

DR. WILLIAM E. CASSELBERRY showed a case in which an unilateral resection of the superior maxilla had been made on account of intranasal fibro-sarcoma, presenting the patient chiefly to demonstrate the degree of deformity resulting. The incision was made from below the orbit around the nose and through the lip, the flap dissected back, and the left maxilla, including the teeth, removed. The man's cheek, however, still has a reasonable prominence. Union has failed along the line of the cleft in the hard palate, so that the patient practically now has an acquired cleft palate.

The situation of the growth and a shadow on translumination led me to think the antrum was involved, and this was one reason why resection of the superior maxillary bone was decided on. When we came to shell the growth out, it was disclosed that the antrum was not directly involved, but I am still of the opinion that the operation was justified by the appearance and character of the growth, but more so on the supposition that the antrum was involved. Had I been able to determine that the maxillary sinus was not affected, I would have advised a less extensive operation. There is, as yet, no definite evidence of recurrence, although the tissue which has partly filled in the space of the cheek bone does not look entirely natural.

Another hazard of the operation concerns the necessity of ligating the common carotid, or at least the external carotid artery, in order to control hemorrhage. Following the operation, this patient became paralyzed on the right side, and the paralysis has persisted somewhat, but it is gradually becoming less. Inasmuch as the line of ligature of the external carotid is very close to the common carotid, the paralysis might have occurred from a clot going through the common carotid as an embolus.

Concha Bullosa.

DR. GEORGE E. SHAMBAUGH presented a median sagittal section of a nose, showing a large bone cyst in the anterior end of the concha media. The cyst had thin, bony walls and was lined with smooth mucous membrane. It measured 28 mm. long and 25 mm. broad, and presented an empty, air-containing cavity, which communicated freely with the middle meatus, with the frontal sinus, with a large ethmoid cell pushed into the frontal sinus, and with the ethmoid labyrinth above and behind. The concha bullosa, or cystic enlargement of the concha media, is usually found as an empty, air-containing cavity, but occasionally it is found the seat of a mucocele or an empyema.

As a rule, it is not associated with any inflammatory condition, and the enlargement should be looked upon not as a pathologic product, the result of an inflammation, but as an anatomic variation, the result of a developmental anomaly.

Laryngitis Ending in Abscess.

DR. O. T. FREER presented two cases. The first was a woman upon whom he operated for an extensive cartilaginous and bony deflection of the nasal septum.

Dr. Freer then read the history of "A Case of Phlegmonous Laryngitis Terminating in Abscess in Front of the Larynx." The patient, aged 54, states that he never was ill until the beginning of this affection. After going to bed in perfect health on February 19, he awoke in the night with his tongue so swollen that he could not close his teeth. He felt a swelling in his neck near the larynx. He had severe dyspnea and could hardly speak. These symptoms continued until March 2, the stenosis slowly increasing. The attending physician found no fever. There was no chill or pain at any time. He could not swallow solids but could dring slowly; if he drank fast he had a coughing fit, the liquid entering his larynx. Examination, March 1, showed the region of the larynx filled by a large tumor-like mass from the hyoid bone to below the cricoid cartilage. The lump was soft in its center, pitted here on pressure and fluctuated obscurely. The lateral portions felt hard.

Palpation caused no pain. Laryngoscopy was impossible as the tumefied epiglottis was pulled down spasmodically by its depressors and touched the posterior pharyngeal wall, while its two sides folded together in the middle.

Suffocation seemed imminent March 2, so that I performed tracheotomy under cocain anesthesia. The abscess contained about two ounces of pus and was seated under the prelaryngeal muscles in front of the laryngeal cartilages. It had a tough, thick anterior wall. The abscess closed in a week and the tumor-like swelling slowly disappeared so that in three weeks the neck felt normal, but the laryngeal stenosis increased so that for some weeks the patient could draw no air at all through his larynx. Inspection showed great swelling of the aryteno-epiglottic folds and arytenoids, and this combined with retraction of the epiglottis made inspection of the deeper parts of the larynx impossible. The tracheotomy tube caused great irritation so that excessive amounts of mucus were coughed up. The swollen arytenoids continued to make swallowing difficult, but, March 19, the voice began to return. April 5 the cords could be seen and looked natural, but remained in a position of adduction, causing stenosis that made it impossible to remove the tube safely. The cords gradually separated so that on April 10 the tube was taken out. The laryngoscopic appearance was normal, but there was still a tendency to retraction of the epiglottis and adduction of the cords.

The history of this case is that of one of the varieties of erysipelatous or phlegmonous inflammation not uncommon in the region of the pharynx and larynx. The agents of septic inflammation enter the tissues through the lymph channels of the mouth and throat with well-known frequency. Whether the milder form or the phlegmonous inflammation ending in abscess will result, depends largely on the virulence of the infection, resistance of the individual and the formation of bubo. The infectious agent in nearly all instances is the streptococcus pyogenes.

The place of infection and direction taken by the septic matter in the lymph channels determines the site of the abscess, whether it will be a peri-tonsillar one, an angina of Ludwig, suppuration of the submaxillary glands, the carotid glands, a retropharyngeal abscess or, as in this instance, an abscess of the prelaryngeal and pretracheal space, called also the pre-visceral space, situated between the larynx and trachea and the muscles in front. In my experience abscess formation in this locality is not very rare. I have seen four cases within the last few years.

In the case which I present to-night the erysipelatous swelling of the laryngeal interior was either merely a part of the widespread inflammatory edema surrounding the deep-seated abscess in the neck, or the abscess was part of the phlegmonous erysipelas of the larynx.

The mildness of the symptoms shown by the patient is remarkable. The usual severe chill, high fever and prostration due to deep-seated phlegmonous processes were absent. The course also was unusually slow, as ordinarily tracheotomy is needed one or two days after the beginning.

The spasmodic retraction or depression of the epiglottis mentioned in the history was remarkable, and seemed to me to have some part in creating the dyspnea. I have seen the same position of the epiglottis in the form of a neurosis due to chronic nicotine poisoning. I have also seen it accompany acute laryngitis and disappear with it. The retraction seems to me due to reflex spasm of the thyro-epiglottic and aryteno-epiglottic muscles which pull down the epiglottis, cause it to fold in the middle and lie against the posterior pharyngeal wall. The depression may also be aided by spasm of the stylolaryngeus and thyrohyoideus lifting the larynx towards the hyoid bone.

The adduction of the cords, in the patient shown this evening, proved to be due to reflex spasm of the adductors and not to posticus paralysis as I had at first supposed it to be, and it and the depression of the epiglottis improved as the laryngeal inflammation grew less. While the swelling was at its height it was impossible to exclude perichondritis of the thyroid or cricoid cartilages from the diagnosis, or to be sure that the abscess was not caused by suppuration due to their necrosis.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Atoxyl (Meta-Arsenous-Acid-Anilid).

Dr. Walther Schild, in the *Berliner Klin. Wochenschrift*, March 31, reports the results obtained from the therapeutic employment of a new arsenical preparation, atoxyl, containing 37.6 per cent. of metallic arsenic, about half as much as arsenous acid. It appears in the form of a white, odorless powder, of feebly salty taste, dissolving in water up to 20 per cent., though about 2 per cent. of crystals precipitate on cooling. On standing for some time the aqueous solution acquires a faint yellow tint, although decomposition does not take place; neither is this effected by boiling. Experiments on animals showed that the preparation was forty times less toxic than would be expected from the amount of arsenous acid it contains, and it is therefore twenty times less toxic than an equal amount of arsenous acid. In human beings administration of even small amounts by the mouth caused impairment of appetite, so that resort was had to subcutaneous injections. It was found that single doses representing 6 grains of the drug and also repeated doses of from 3 to 5 grains caused unpleasant effects, such as chilliness, vertigo, headache, irritability of the throat, but these subsided soon after withdrawal of the drug. Marked cardiac disease constitutes a contra-indication to the use of the preparation, inasmuch as it gives rise to palpitation of the heart and dyspnea even when administered in small doses. In the clinical employment of the preparation a 20 per cent. solution was used, and of this from 3 (gr. 3/5) to 15 minims (3 grains) were administered. The first five injections were given on successive days, and the remainder on alternate days. Seventy-five patients were thus subjected to treatment, receiving about 1500 injections without accident. Among the disorders from which they suffered are alopecia areata, dermatitis herpetiformis, cutaneous sarcomatosis, dermatitis exfoliativa chronica, xanthoma multiplex diabeticum, psoriasis, lichen ruber. In some cases topical applications were made at the same time, while in the remainder the injections constituted the sole medication. The results were entirely satisfactory, the drug being well borne and free from irritation and injurious effects, and the special advantage being the lesser frequency of administration.

Laryngitis and Acute Bronchitis.

Lilgeois, in *Med. News*, prescribes the following mixture in treatment of acute attacks of laryngitis and bronchitis:

R.	Sodii benzoatis	3ss	2
	Tinct. aconiti	m. x	60
	Aq. laurocerasi	3ss	2
	Syr. tolutani		
	Syr. Codeinæ		
	Aq. destil., āā	℥i	30

M. Sig.: To be taken in divided doses in the twenty-four hours.

Apomorphin in Hysteria and Epilepsy.

According to Faucher in *Ther. Month.*, apomorphin in doses of one-fifteenth to one-tenth grain is a rapid method of arresting an attack of hysteria or hystero-epilepsy and even an epileptic seizure. The vomiting which follows the injection and the subsequent depression soothes and relaxes the nervous system and controls the seizure. He states that it is a specific against attacks of hysteria, whatever form they may assume. The epileptic is usually inclined to eat too much, and the seizures frequently follow a heavy meal. The indications, therefore, are to relieve the digestive system and reduce the congestion of the nerve centers, both of which are promptly accomplished by apomorphin, although it is by no means a specific against epilepsy.

Thrush.

In young infants, thrush is frequently met by the general practitioner, especially in bottle-fed infants. W. J. Robinson of New York, in *Merck's Archives*, treats this condition with the following application, which, he states, is a never-failing combination.

℞.	Sodii hyposulphitis	3iss	6
	or:		
	Sodii sulphitis	3ii	8
	Glycerini	3vi	24
	Aq. menth. pip. q. s. ad	3ii	60

M. Sig.: Wrap a piece of absorbent cotton around the finger, dip into the solution and swab the mouth and tongue thoroughly.

This application should be repeated every half hour. No harm can result if the child should swallow some of the mixture. The efficiency of the foregoing solution is found in its chemical combination, as these salts liberate sulphurous acid gas or sulphur dioxid (SO_2), a powerful antiseptic, while sulphur is deposited locally in a finely powdered state. He further states that in many cases of thrush the discharges are extremely acid; the parts about the anus become excoriated and cause the child further suffering. He then recommends internal treatment by mild alkalies and bismuth in the following combination:

℞.	Magnesiæ (calcined)	3ii	8
	Bismuthi subnit.	3i	4
	Syr. rhei arom.	3iii	12
	Cord. anisi	3v	20

M. Sig: One half to one teaspoonful three to five times a day.

Locally a drying powder should be frequently applied around the anal region. The following is recommended by him:

℞.	Zinci oxidi		
	Bismuthi subnit., āā	3ii	8
	Lycopodii	3iv	16

M. Sig.: Apply locally as a dusting powder.

Cacodylic Acid in Diseases of the Skin.

Saalfield, as noted in *New York Med. Jour.*, states that he has used cacodylic salts in fifty cases of various skin diseases. The cacodylate of iron or sodium may be given internally in the form of pills containing four grains each, four times daily. A 5 per cent. solution may also be used, of which the dose is from ten to twenty drops, the maximum daily dose being forty drops. According to the author, the cacodylic salts are far superior to all the arsenic inorganic compounds in the treatment of skin diseases. He has never seen any disagreeable symptoms from their use. He has obtained excellent results with these drugs in the treatment of lichen planus rubra.

Salicylic Acid for Soft Chancre.

The following has been recommended by Szanto, according to the *New York Med. Jour.*, in the treatment of soft chancre:

℞.	Acidi salicylici	gr. xv	1
	Tinct. benzoini	3ss	2
	Petrolati	3i	30

M. Sig.: Apply locally night and morning.

Ichthargin in Gastric Catarrh.

Ichthargin has been recommended in the treatment of gastric catarrh, dilatation and in gastric ulcer as follows:

℞.	Ichthargin	gr. ss	03
	Aq. destil.	3viii	240

M. Sig.: One teaspoonful three times a day.

In the treatment of chancroids it may be applied in the form of an ointment as follows:

℞.	Ichthargin	gr. xv	1
	Glycerini	m. xv	1
	Aq. destil.	gtts. viii	50
	Petrolati q. s. ad	3ii	8

M. Rub well the silver salt with the water and glycerin and then add to the petrolatum.

Diarrhea in Infants.

N. S. Davis, in "Sys. of Physiologic Ther.," recommends in the treatment of diarrhea in infants due to over- or irregular feeding or in bottle-fed infants, that all food be withheld for twelve or even twenty-four hours. The stomach should be cleansed by lavage if possible; if not, by a mild mercurial or castor oil. Sterilized water, and in the mildest cases a little egg albumin in water or barley water may be given to quench the thirst. Later, when the stools are less frequent and move natural, beef juice or thin mutton or chicken broth may be taken. Milk well diluted should be given after convalescence is established. Lime water is the best diluent. When excessive intestinal fermentation as well as diarrhea exists, a modification of milk is essential. If the stools have a sour smell and are acid in nature, the percentage of both sugar and fat should be lowered. If the odor is putrid the albumin should be lessened. All foods should be given in small amounts and often until convalescence is established.

Carbuncle.

The following combination, according to Dr. L. B. Young, in *Med. World*, gives great relief and checks the course of carbuncles:

℞.	Hydrarg. oxidi rubri	3i-3ii	4-8
	Menthol	gr. xx	1 30
	Pulv. camphoræ	gr. xv	1
	Cocainæ hydrochlor	gr. x	65
	Acidi carbol.	m. xx	1 30
	Morph. sulph.	gr. v	30
	Vaselini	3i	30

M. Ft. unguentum. The menthol, camphor, cocain and carbolic acid should first be mixed together. The red oxid of mercury and the vaselin likewise mixed together, then mixed with the other ingredients. Sig.: Spread on sterilized gauze and apply, changing the dressing four or five times a day.

As an Inhalation in Asthma.

The following is recommended by the *Pract. Druggist* in the treatment of the attacks of dyspnea in asthma:

℞.	Gum benzoin	3ss	2
	Pulv. jaborandi foliæ	3i	4
	Pulv. stramon. foliæ	3ii	8
	Potassii nitratis	3ii	8
	Carbo. ligni	3x	40

M. Sig.: To be ignited and the fumes inhaled.

The foregoing powder should be stirred with sufficient thin mucilage or tragacanth to form a stiff mass, then rolled into pencils and cut into pieces of suitable length. One of the pencils may be used at each treatment.

Treatment of Lumbago.

The *Practitioner* recommends the following as a local application in the treatment of lumbago:

℞.	Tinct. opii.	3ii	8
	Aq. ammon.	3i	4
	Tinct. Cantharidis	3iii	12
	Linimenti saponis	3x	40

M. Sig.: Apply locally with thorough friction.

W. J. Robinson recommends the following as a local application in articular rheumatism or lumbago:

℞.	Camphor-chloralis	3i	4
	Acidi salicylici	3ss	2
	Menthol	gr. xx	1 30
	Pulv. capsici	3i	4
	Ol. sinapis	gtts. viii	50
	Adipis lanæ	3iv	15
	Petrolati q. s. ad	3ii	60

M. Sig.: Apply with vigorous friction.

Acute Otitis Media.

Macleod Yearsley, in the *Month. Cyc. of Pract. Medicine*, states, in an attack of acute middle ear inflammation, that the matter of first importance is absolute rest. The patient should be confined to his room, and if there is a likelihood of the case being of the suppurative type, he should be kept in bed. The ear should be protected from anything which is likely to increase the inflammation, and stimulating foods, alcoholic liquors, mental excitement and physical exertion must be forbidden. A large saline purge should be given. The pain can best be allayed by the application of heat or cold, or by the combination of the two. Heat may be employed dry by means

of the hot-water bag, hot flannels, or moist by instilling it into the ear. In using hot instillations a temperature of 115° F. will suffice. The continued influence of heat keeps the ear in a condition of congestion which retards resolution and favors the continuance of the inflammation, while the application of cold, especially to the parts surrounding the ear, often rapidly lessens the inflammation. The region below the auricle may be covered with cold compresses or an ice bag, and warm fluids may be instilled into the ear or hot sponges inserted. This has proved a useful method. But the best method of all is the application of leeches. From two to four or six, applied just in front of the tragus, will often cut short the pain and inflammation with rapidity. Their application should be followed by dry heat.

Medicolegal.

Statements to Physician Long After Accident.—The Supreme Judicial Court of Massachusetts says, in the personal injury case of Cronin vs. the Fitchburg & Leominster Street Railway Company, that it is plain that the statement by a party to a cause of his bodily and nervous symptoms, made long after the occurrence of the accident to which he attributes them, and for purposes connected with the preparation for trial of a suit in which his condition of health is material, and not made to a physician for the purpose of obtaining advice for treatment, are not admissible in evidence in his own favor as proof of the matters stated. It is equally plain that every person admitted as an expert to testify to his opinion may state on his testimony the grounds and reasons for that opinion, and that the party calling the expert may put in evidence those grounds and reasons in the direct examination of the expert, and before calling upon him to give his opinion to the jury. In this case, where a physician made two examinations of the party suing for the purpose of testifying for him, and testified as to statements made by such party to him, there was no doubt, the court says, that the statements of the party were hearsay, and of that particularly dangerous and objectionable type—declarations of an interested party, made after suit brought, and for the very purpose of preparing evidence to be used in his own favor at the trial. But no such rule applied to them as that which excludes private conversations between husband and wife, or communications between attorney and client. They might be admitted in evidence if offered by the adverse party, either as admissions or as contradictions of the testimony of the person who made them. It followed that they might be admitted as the grounds and reasons of an opinion given in evidence, or to be so given, by an expert. Being admissible for that purpose, the exception to their admission was not well taken.

Allowing Physician to Publish Article in Case.—The first appellate division of the Supreme Court of New York takes a different view from that of the trial term on the question of the waiver of privilege in the case of Scher vs. The Metropolitan Street Railway Company. The action was brought to recover damages for personal injuries claimed to have been sustained by the party suing through the negligence of the company's servants in managing or operating a street railway car. The record showed that the party testified that, some 17 years before the accident occurred, he had suffered from serious illness in Germany for a period of about 7 years, during the greater part of which time he had been in a hospital, and confined to his bed. The company called as a witness a physician connected with a hospital in the City of New York to which the party resorted for treatment after the alleged accident. That physician was permitted to testify that he treated the party, who was suffering from a very rare disease, of so interesting a character that he was exhibited before a society of physicians at a public meeting, and an account of his peculiar disease was published by the witness in a medical journal; and he swore that the account was published with the party's knowledge and approval. Then, in the course of his examination, the witness was asked whether, prior to the preparation of the article published by him in the medical journal, the party told him that 17 years previously he had suffered pains in the legs, lasting day and night, which forced him to stay in bed for 7 years. This was objected to on the ground that it was privileged. The trial term overruled the objection on the ground that the nature of the party's disease having been made public by his consent, the privilege was waived. But the appellate division thinks, under the authorities, that the communications made by the party to the physician were privileged, and there had been no waiver, even if the publication of the article and the public exhibitions were, as testified by the physician, though denied by the party, with the latter's full consent. It holds that, there being no waiver "upon the trial or examination," as provided by Section 836 of the New York Code of Civil Procedure, but, on the contrary, an objection made to the physician's violating the privilege, the ruling of the trial term admitting the testimony was clearly erroneous.

Removal of Sponges—Skill Required of Surgeon.—The Supreme Court of Georgia has affirmed a judgment in favor of the surgeon sued in the case of Akridge vs. Geo. H. Noble, an action for malpractice in which it was claimed that a sponge or pad which had been placed in the body of the party suing for the purpose of absorbing blood and pus while an operation was being performed had been carelessly left in the body after the wound had been closed, from which injury resulted. It holds that it was not error for the trial judge to charge the jury that, if they believed the pad or sponge had been in fact left in the body, they should then determine whether it was so left by reason of the failure of the surgeon to exercise due care and skill, and that he owed the party suing a duty to exercise reasonable care and skill in performing the operation; including in that expression not only the opening of the body and the removal of the affected parts, but also the use and handling of the sponges or pads. It says that the civil code of that state declares that a person professing to practice surgery must bring to the exercise of his profession a reasonable degree of care and skill, and that any injury resulting from a want of such care and skill will be a tort, or wrongful act, for which a recovery may be had. The reasonable and ordinary care, skill and diligence which the law requires of physicians and surgeons are such as those in the same general line of practice in the same general locality ordinarily have and exercise in like cases. The surgeon belongs to one of the learned professions, and he is required to bring to the exercise of his profession not only due care, but also due skill. "Skill," in the sense in which it is here used, includes not only the knowledge or information which the surgeon has in reference to the propriety or desirability of a given operation, but also the ability to perform the operation in a proper and approved way. And the court says that it must admit that it is unable to apprehend any clear distinction to be seen between the duty of the surgeon at the different stages of what, for want of a better term, it calls the "operation." It seems to it that the operation begins when the opening is made into the body, and ends when this opening has been closed in a proper way, after all appliances necessary to the successful operation have been removed from the body. From the time the surgeon opens with his knife the body of his patient until he closes the wound thus made, in a proper way, the law imposes upon him the duty of exercising not only due care, but due skill as well. During the entire time he must not only know what to do, but he must do it in a careful and skilful manner. The removal of pads or sponges from the body seems to require some degree of skill. It at least requires a surgeon to perform this service, and, if this is admitted, it is at the same time admitted that skill is required in the performance of the work. The court does not suppose that any one would contend for a moment that a surgeon would be authorized to leave this part of the work, even if not a part of the operation, or necessarily incident thereto, to any one who was not skilled in the science of surgery. The person seeking to remove sponges which have been placed in the human body must be possessed of the requisite knowledge and information to find where they may have been placed, or may have gone during the performance of the operation; and this knowledge or information on the part of the surgeon is what is called "skill." The removal of the sponges is a part of the operation; it is a part which requires the exercise of skill. But the surgeon here sued testi-

fied positively that he removed all of the pads; that he reached down in the cavity as far as he could reach, searched all over, and removed all of the pads; that he knew he got them all out, because he went thoroughly through the cavity, and found nothing there; that he was satisfied he had found all that were placed therein. In addition to this, the testimony of numerous surgeons was to the effect that, if a pad had been left in the body as claimed by the party suing, it would have resulted in her death within a short time after the operation had been performed, whereas she claimed that it remained in her body more than a year, and finally passed out of her body through the rectum, having passed into the rectum through a fistula which it had caused. The evidence, the court holds, fully authorized a verdict for the surgeon.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine (Philadelphia), May 10.

1 *A New Species of Hookworm (Uncinaria Americana) Parasitic in Man. Ch. Wardell Stiles.
2 Two Cases of Cancer of the Rectum Operated on by Murphy's Method. Wilmer Krusen.
3 A Case of Tuberculous Salpingitis from Which the Tubercle Bacillus Was Grown. Howard S. Dittrick.
4 *Report of a Case of Carcinoma of the Cecum and a Case of Rupture of the Sigmoid Treated by Intestinal Anastomosis. Eugene A. Smith.
5 *Palmar Reflex (Preliminary Note). John H. W. Rhein.
6 A Comparative Climatic Study of the Arid and Semi-Tropic Southwest and Its Relation to Tuberculosis. (To be continued.) William W. Betts.

New York Medical Journal, May 10.

7 *A New Study of Mitral Obstruction, with Illustrative Cases. Thomas E. Satterthwaite.
8 *Toxic Dosage in the Treatment of Some Nervous Disorders. William C. Krauss.
9 *Technics of the Operation and Results of Tendon Transplantation at the Hospital for the Ruptured and Crippled. V. P. Gibney.
10 *Neurologic Questions in the Operation of Tendon Transplantation. Joseph Collins.

Medical Record (N. Y.), May 10.

11 *Remarks on Arteriosclerosis. I. Adler.
12 *The Indications for Nephrectomy, with Report of Three Cases. Joseph Wiener, Jr.
13 *Resection of the Cervical Sympathetic Ganglia in Glaucoma; Its Present Status. Wilbur B. Marple.

Medical News (N. Y.), May 10.

14 *Sudden Death in Aortic Stenosis, with Report of two Cases, one Complicated with an Aneurysmatic-like Dilatation of the Aorta at Its Root and Marked Stenosis of the Vessel Beyond the Dilatation. James M. Anders.
15 *Remarks on the Diagnosis of Pregnancy in the Early Months. Charles Jewett.
16 *Diagnosis of Diseases of the Biliary Passages. N. E. Brill.
17 Empyema of the Gall-Bladder. Lucius W. Hotchkiss.
18 *The Surgery of Gallstones. Joseph A. Blake.

Boston Medical and Surgical Journal, May 8.

19 *The Patrol Ambulance an Adjunct to the Ambulance Service in Cities; a Substitute therefor in Towns. Francis D. Donoghue.
20 *Therapeutics and the Drug Manufacturer. Brace W. Loomis.
21 A Case of Tetany in an Adult. Edwin A. Locke.
22 Two Unique Cases of Hysterectomy. W. P. Giddings.

Philadelphia Medical Journal, May 10.

23 President's Address, The Association of American Physicians. J. C. Wilson.
24 *A Voluntary Board of National Examiners. William L. Rodman.
25 *Diagnosis and Management of Some of the More Common Lesions of the Adult Knee. V. P. Gibney.
26 *The Kidney Complications of Typhoid Fever. James E. Talley.
27 *Value of the Justus Test, with Report of Cases. Henry Tucker.
28 *The Justus Test for Syphilis, with Report of Cases. William E. Huger, Jr.

Cincinnati Lancet-Clinic, May 10.

29 *Inherited Tuberculous Predisposition. G. A. Fackler.

Northwestern Lancet (Minneapolis), May 1.

30 *Clinical Features, Diagnosis and Treatment of Pneumonia, with Discussion. L. A. Nippert.

Pediatrics (N. Y.), April 1.

31 Rötheln. C. C. Ross.

May 1.

32 Diphtheria. (To be concluded.) J. C. Cook.
33 Diabetes Insipidus. Walter F. Boggess.
34 Complication Following Removal of Adenoids. E. A. Montenyohl.

American Practitioner and News (Louisville, Ky.), May 1.

35 Valedictory. University of Louisville. Earl R. Snyder.
36 The Improvement in Materia Medica and Therapeutics During the Past Century. John G. Cecil.
37 Nervous Dyspepsia or Gastric Neurasthenia. J. J. Moren.
38 Acute Articular Rheumatism. P. H. Crutchfield.

Medicine (Detroit, Mich.), May.

39 *The Surgery of Cholecystitis. J. Chalmers Da Costa.
40 *The Pathology of Cholecystitis. Joseph McFarland.
41 *The Etiology of Cholecystitis. Joseph Sailer.
42 *Chlorosis and Its Relation to the Eye. George F. Suker.
43 Sydenham's Chorea in Adult Life. D. J. McCarthy.
44 Hysteria in the Male. John H. W. Rhein.

Western Medical Review (Lincoln, Neb.), May 15.

45 The Nebraska State Medical Society; Its History for the First One-third of a Century. A. S. V. Mansfelde and H. Winnett Orr.
46 *Grave Abdominal Injuries Without External Evidences of Traumatism. R. Harvey Reed.
47 *The Immediate Effects of Intestinal Exposure. A. W. Abbott.

American Journal of the Medical Sciences (Philadelphia), May.

48 *The Localization of the Mental Faculties in the Left Prefrontal Lobe. Charles Phelps.
49 *The Unilateral Occurrence of Kernig's Sign as a Symptom of Focal Brain Disease. Joseph Sailer.
50 *Report of One Hundred Cases, All Non-Meningitic, Examined for Kernig's Sign. William G. Shields, Jr.
51 *Three Cases of Meningitis in Which Kernig's Sign was Persistently Absent. F. S. Clark.
52 *The Treatment of Thrombosis of the Lateral Sinus Following Middle Ear Suppuration. Edward B. Dench.
53 Hemihypertonia Postpapoplectica, with Some Remarks on a Contralateral Accessory Motor Speech Center. D. J. McCarthy.
54 *The Etiology of Infantile Paralysis. Alfred M. Gossage.
55 Report of a Case of Alcoholic Multiple Neuritis. L. W. Atlee.
56 *Hepatic Lesions in Infancy. Martha Wollstein.
57 *The Sacrococcygeal Dimples, Sinuses and Cysts. Francis H. Markoe and Winfield S. Schley.
58 A Case of Transitory Cystinuria Associated with Diaminuria. Milton W. Lewis and Charles E. Simon.
59 *The Causes and Varieties of Chronic Interstitial Pancreatitis. Eugene L. Opie.
60 A New Cabinet for Microscopic Slides, Designed by the Late Thomas S. Kirkbride, Jr., M.D., of Philadelphia. Mary B. Kirkbride.
61 Further Studies of Granular Degeneration of the Erythrocyte. Alfred Stengel, C. Y. White and William Pepper.
62 The Lateral Chain Theory of Ehrlich as Explanatory of Toxins, Antitoxins, Bacteriolysins, and Hemolysins. F. P. Gay.

Louisville Monthly Journal of Medicine and Surgery, May.

63 Meniere's Symptom. Samuel G. Dabney.
64 Laryngeal Lupus, with Exhibition of Cases. Thomas C. Evans.
65 *Gonorrheal Rheumatism. J. Douglas Westervelt.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), May.

66 A Preliminary Report of Two Cases of Cutaneous Blastomycosis (Blastomycetic Dermatitis of Gilchrist). Frank Hugh Montgomery.
67 *Acne and Sycosis Treated by Exposures to Roentgen Rays. William A. Pusey.
68 A Plastic Operation for a New Scrotum, with Report of a Case of Gangrene and Slough of the Integument Over the External Genitals. Ramon Guiteras.
69 Two Cases of Rare Bromid Eruption. T. F. Wallhauser.

Medical Review of Reviews (N. Y.), April 25.

70 *Gonorrheal Rheumatism. J. Douglas Westervelt.

New York State Journal of Medicine (N. Y.), May.

71 Perforation of Gastric Ulcer, with Report of a Case Operated Upon Successfully After a Lapse of Sixty Hours. Lucius W. Hotchkiss.
72 *Asthma of Blood Origin and Not Nerve or Reflex. G. N. Jack.
73 The Use of Paraffin in Surgery. Edward P. Robinson.
74 The Prognosis and Treatment of Diabetes Mellitus. William H. Biggam.

Kingston Medical Quarterly, April.

75 Some of the Diagnostic and Therapeutic Uses of the Roentgen Rays. James Third.
76 Notes on Surgical Cases. W. G. Anglin.
77 The Canadian Medical Graduate in London. A. R. B. Williamson.
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79 Outlines of Psychiatry in Clinical Lectures. (To be continued.) C. Wernicke.
80 Gall's Special Organology. The Sexual Instinct. P. J. Moebius.
81 Juvenile Female Delinquents. (To be continued.) Eugene S. Talbot.
82 Puberty and Genius. (To be continued.) Cesare Lombroso.
83 *A Question of Figures. (To be continued.) E. C. Spitzka.

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84 Differential Diagnosis of Smallpox. James Patterson.
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86 *Report of Experiments with Yellow Fever Fomites at Las Animas Hospital, Havana, Cuba, September-November, 1901. John W. Ross.
87 The History of the Louisiana Leper Home. Isadore Dyer.
88 Senile Chorea. A. M. Leonard.
89 A Case of Carbolic Acid Poisoning—Recovery. A. C. King.
90 Ecthol in Scarlet Fever. John M. Turk.

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91 Experiments in Climatology—The Canadian Summer. Ezra H. Stafford.
92 Vaginal Section—Exploratory and Operative. T. Shaw Webster.
93 *On Some Medical Facts and Usages Among the Indians and French Canadians. W. L. T. Addison.

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94 An Otologic Clinic. William L. Ballenger.
95 A Case of Sporadic Cretinism. Cliff. Lindsey.
96 Practical Dietetics. (To be continued.) A. L. Benedict.
97 Perforation of the Nasal Septum. James M. Brown.
98 Pain and Its Indications. Edward C. Hill.
99 The General Principles of Symptoms in Diseases of the Nervous System. Herman Gasser.

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100 *Adrenalin in the Urethra. E. F. Howard.
101 *Treatment of Typhoid Fever with Castor Oil. C. C. Bass.

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102 *What Can We Diagnosticate in Acute Appendicitis? Willy Meyer.

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103 The Operative Treatment of Trachoma and Its Sequelæ. Albert E. Bulson, Jr.

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104 The Medicine of the Dawning Century. James E. Pilcher.
105 *Surgery as a Last Resort. Glorus F. Lawrence.
106 Hypertrophy of the Heart. Edwin F. Wilson.
107 Dilatation of the Heart. Elmer T. Kuhn.
108 Lung Complications Due to Heart Diseases. Darlington J. Snyder.
109 The Effects of Heart Disease on the Kidney. Conrade A. Howell.
110 Complications in the Liver Resulting from Heart Disease. William F. Bay.

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111 An Unusual Case of Cerebellar Tumor and Abscess. B. E. Hadra.
112 So-called "Typho-malarial" Fever. J. C. Gardner.

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113 The Technics of Amputations. (To be continued.) R. H. Cowan.
114 A Brief Review of Some of the Tumors of the Periphery of the Body, Their Pathologic Characters and Treatment. Thomas H. Manley.
115 Nose and Throat Work for the General Practitioner. (Continued.) George L. Richards.
116 The Surgical Assistant. Walter M. Brickner.
117 Intracranial Lesions. W. W. Harper.

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1. **New Species of Hookworm.**—Stiles reports and describes a new form of Uncinaria which differs from the Uncinaria duodenalis, chiefly in the absence of ventral recurved hook-like teeth, their places being taken by a pair of semilunar plates, somewhat similar to U. stenocephalia of the dog. The species was found in a man at Galveston. It appears, therefore, that there are probably two species of hookworms contributing to the disease uncinariasis in man. This newly-described species is known to occur in Texas, Virginia and Porto Rico, which shows that we have here a special heretofore undescribed parasite causing the disease. This also indicates the practical correctness of the view that uncinariasis is endemic in the southern states, though rarely recognized.

4. **Intestinal Anastomosis.**—Two cases reported by Smith are commented on. In both the anastomosis was by lateral insertion of one end into the bowel, and he thinks there are several advantages in this method: "A better circulation is insured for each end of bowel. Each cut edge of mesentery is free to recover its circulation, eliminating the so-called "dead space" at the mesenteric border which leads to leakage in end-to-end coaptation. At the site of the anastomosis a far better circulation is insured, because only the cut end of bowel has had its mesenteric circulation impaired. Danger of leakage is lessened, one end of the bowel, with dubious circulation and reparative power being closed so that simple peritoneal adhesive action will occlude it, and the other end entering bowel with normal reparative power. And there is less breaking strain from peristalsis, I am inclined to think, because peristalsis in end-to-end anastomosis acts more vigorously on a new junction. The only serious disadvantage in the operation is found in the added injury to healthy intestine to insert the cut end of bowel. Again the blind end of bowel may develop fecal impaction as a minor disadvantageous possibility. I think the operation is indicated in cases of cancer, stricture, or other disease-producing obstruction of the bowel in the sigmoid and ileocecal regions. In a great measure this would render colostomy unnecessary, either through extirpation of the diseased area, or by short-circuiting the disease if inoperable. In gunshot wounds of the intestine with many perforations, in rupture of the intestine; in fact, in all conditions requiring anastomosis, when the circulation is dubious at the site of the bowel disease, this method of operation recommends itself."

5. **Palmar Reflex.**—Rhein has observed in a case of hemiplegia and in a case of disseminated sclerosis what he thinks is a new reflex. Slight irritation of the palmar surface of the hand with the point of an esthesiometer was followed by an extension of the hand and fingers. Sometimes only the hand was extended, and sometimes only one or more fingers. The arm was not drawn away in a manner analogous to the withdrawal of the foot when the plantar surface is irritated. He has not found a description of any such reflex in the literature and therefore offers it as a novelty.

7. **Mitral Obstruction.**—This is, as Satterthwaite remarks, apparently not a very uncommon condition, though well-marked mitral obstruction is somewhat rare. As a rule, it implies regurgitation, though this may occur without obstruction as in the earlier stages of organic insufficiency. In all cases of relative inefficiency, regurgitation is often primary to obstruction and subsequently its associate. Clinically, there is a close relation between them, but the prognosis of regurgitation is supposed to be rather better than that of obstruction. He reviews the diagnosis and symptoms, pointing out the difficulties in mitral obstruction. We have at first simply the signs of mitral insufficiency. Then when signs of regurgitation give way to those of obstruction, the right ventricle becomes hypertrophied and the impulse is thumping or strong. In a certain proportion of cases there is a thrill and a diastolic murmur, perhaps a presystolic and sharp "tapping" first sound at the apex. In the late stage when compensation fails the presystolic murmur disappears, because the auricle has no longer strength to drive its columns into the left ventricle. The right auricle becomes dilated through giving way of the tricuspid, causing pulsations in the veins of the neck. Dyspnea, dropsy and pulmonary apoplexy will then supervene. The following points are enumerated: "1. Mitral obstruction is usually fatal before the age of 40. 2. Females are little more prone to it than males. 3. There is apt to be a marked contrast between a strong cardiac impulse and a feeble radial pulse. 4. The true presystolic murmur occurred in 15 per cent. of my cases. It comes and goes, but is usually inaudible in the last stage. 5. It is apt to have a loud rasping or sawing quality, but may be 'gushing' or 'whirring.' It may also be faint or inaudible. 6. In about 40 per cent. there is some sort of diastolic murmur. 7. These murmurs are best heard over a rather limited area, somewhat oval in form, having for its center an area between the fourth left space, inside the nipple and the apex, and extending an inch or so to the right or the left. Occasionally this murmur is heart best as low as the fifth, sixth or even seventh left space; more rarely it is heard as high as the second left rib. 8. In 10 to 35 per cent. there was a thrill over this area. 9. The first sound at the apex is short and abrupt. 10. The second pulmonary sound at the base is usually intensified. 11. Occasionally a murmur with the second sound at the base is heard over the left auricular appendix. 12. At first there is hypertrophy of the left ventricle. Then atrophy of it, with hypertrophy of the left auricle; then follow dilatation and hypertrophy of the right heart. 13. Mitral insufficiency must to some extent accompany mitral obstruction. 14. In distinguishing the presystolic murmur of mitral obstruction from the Flint murmur of aortic insufficiency, we should rely on the 'long heart' and the strong impulse, or the 'Corrigan' of insufficiency, rather

than auscultatory signs. In case there is both aortic insufficiency and mitral obstruction a differential diagnosis is impossible, with the means we have now at our command."

8.—See abstract in THE JOURNAL of February 15, p. 472.

9. **Tendon Transplantation.**—Gibney reports and tabulates some 67 cases of tendon transplantation for various conditions, such as drop-wrist, talipes, dangle-leg, etc., and 7 cases of astragalectomy, arthrodesis and tendon transplantation. He finds altogether 92 patients were operated on and the final results ascertained in 67. Good results were obtained in 34 per cent., fair in 45 per cent., and negative in 21 per cent. "Taking, now, the deformities for which the operations were done, we have the following: Equino-varus 16, good 4, fair 9, negative 3; equinus 5 cases, good 1, fair 4; equino-valgus 22, good 10, fair 9, negative 3; calcaneo-valgus 10 cases; good 6, fair 3, negative 1; pure valgus 2 cases, good 1, fair 1; calcaneus, 1 case, fair result; dangle-leg 5 cases, negative 5; drop-wrist, 6 cases, good 1, fair 3, negative 2."

10. **Neurotic Questions in Tendon Transplantation.**—Collins points out that the chief point in the treatment of infantile cerebral palsy is the necessity of the differentiation of their causes, carefully distinguishing between those due to the gross destruction of tissues, as from hemorrhage and porencephaly, and palsies due to encephalitis and absence of development of the medullary sheaths as in Little's disease. In the latter cases there is often no real paralysis. The fixation and spasticity are the principal symptoms. If the patient could only send an impulse to make his motor apparatus work it would functionate, but there is the loss of the delicate co-ordinating or tonico-antagonistic impulses. One of the principles upon which the operation of tendon transplantation is advisable in these cases is to conduct an excess of innervation going to the muscles that are spastic, to the functional antagonists that are not, and to not only overcome the deformity produced by the former, but to add to the voluntary mobility of the part as well. The question of tendon transplantation for deformities resulting from anterior poliomyelitis are easier to answer satisfactorily. The motor nerve impulse depends upon its central mechanism and may by operation be switched from an extensor to a flexor muscle at will. It depends entirely on the track and on the apparatus to which it goes. There must also be developed a new muscle individuality which is the result of adaptation, not only of co-ordinating centers in the brain cortex, but in the peripheral parts as well. The sensory feelings in the part must be adapted in consciousness to the motor impulse, and he illustrates his ideas by diagrams. He thinks the field of applicability of tendon transplantation is wider than has been generally supposed and its use should be urged not only in the deformity of infantile palsy, but in similar deformities of the cerebral spastic hemiplegias and possibly also of spinal traumatic spastic palsies.

11. **Arteriosclerosis.**—Adler does not consider that Thoma's theory furnishes a complete and extensive explanation of all the facts of arteriosclerosis, at least in the smallest vessels and in the parenchyma. It is not impossible, he says, that definite local or systemic metabolic derangements can be conceived as a cause of indurative and degenerative lesions in blood vessels and connective tissue. Arteriosclerosis may be conceived as occurring in the smaller and smallest vessels and always and without exception associated with indurative processes in tissues and organs. It may begin in a single viscus and become generalized. It is by no means always a disease of advanced age or senility. He thinks it can be recognized more frequently in young adults if the condition of smaller vessels is most closely studied. There are also possible chemical changes which are important factors in its etiology; hereditary predisposition is also to be considered. He discusses the symptoms and the well-known types, renal, cerebral and cardiac, and mentions two others which he thinks have not yet been recognized. One is a spinal type which may be considered as possessing distinctive features. It occurs usually in the more or less senile states with symptoms more or less simulating tabes and not infrequently diagnosed as such. The second type to which he wishes to call attention is the gastrointestinal. It is very probable to his mind that there is a set of gastric, intestinal and cirrhotic symptoms in arteriosclerosis, all of them depending on indurative and atrophic conditions of stomach, intestine, pancreas and liver which are the direct consequence of direct arteriosclerotic indurations. He thinks that perhaps the mild glycosuria of old arteriosclerosies may, at least in part, be due to this arteriosclerotic fibrosis of the pancreas. As to the therapeutics, he briefly urges the importance of recognition of the underlying conditions, such as the poisons of syphilis, alcohol, or other toxic action, and he has also urged, beside the use of special drugs that may be employed, the systematic use of the iodids. Prophylaxis is important, but our knowledge of physiologic chemistry and of the chemistry of arteriosclerosis in particular is too indefinite to enable us to lay down an absolute specific dietary. We should follow the general rules of diet and hygiene as borne out by experience and common sense.

12. **Nephrectomy.**—Wiener enumerates the conditions justifying nephrectomy and remarks in regard to the details of the examination and its dangers, especially those of infecting the healthy ureter and through it the healthy kidney. He divides the indications into three classes according to the age of the patient. 1. In infancy, the indication falls into two groups, congenital malformation and new growths. The former is usually an obstruction producing hydronephrosis. The tumors are usually sarcomatous. The indications for nephrectomy during adolescence are in the majority of cases, pyelonephritis, or a septic nephritic of hematogenous origin following in the wake of one of the acute infectious diseases. A perfectly healthy kidney may be thus involved. Cases are reported of operation in both cases. In adult life the indications are: 1. Hydronephrosis; 2, pyelonephritis and pyonephrosis; 3, tuberculosis, and 4, malignant growths. "The indications for nephrectomy for hydronephrosis may be summed up briefly as follows: (*a*) Sacs with obliterated ureters; (*b*) sacs with little or no kidney tissue remaining; (*c*) repeated failure of palliative operations, i. e. nephropexy, nephrotomy, plastic operations, extraction of stone. Only rarely in the adult will it be necessary to remove a kidney for hydronephrosis." Pyelonephritis and pyonephrosis. The surgical treatment may be summed up in two words, nephrotomy and nephrectomy. It is difficult to say which is the better primary operation. When the presence of many pus pockets renders the nephrotomy operation too tedious and dangerous, a primary nephrectomy is indicated. But on the other hand, by doing a primary nephrotomy, we give the system time to get accustomed to the use of only one kidney and have the opportunity of judging the functionating capacity of the opposite kidney before attempting to do a nephrectomy. Practically, we do not find such a marked disturbance in the urinary excretion as we do in cases of primary removal of a kidney. The remote results of a nephrotomy may be bad in conducing to the development of sepsis; or a renal fistula may remain. A case is reported. In kidney tuberculosis hematuria is often the earliest symptom, usually unilateral, is commonest in women and may remain latent for many months. The earlier the diagnosis of renal tuberculosis is made the less likely is the bladder to be affected. The symptoms to which the disease may give rise have been summed up by Morris as lumbar pain, polyuria, pyuria with acid urine, hematuria with acid urine, frequent nocturnal as as well as diurnal micturition, tubercle bacilli in the urine and the general symptoms of tuberculosis. The differential diagnosis of renal calculi is often very difficult in the early stages. The malignant growths are usually found after the forty-eighth year, which is in contrast with tuberculosis which is most frequent between the twentieth and fortieth year. The new growth is usually a sarcoma or carcinoma. "The characteristic points about renal tumors are: (*a*) Large intestine is anterior to the tumor. On the right side the colon is usually anterior and to the inner side of the tumor. On the left side the colon is anterior and to the outer side. This distinguishes a renal tumor from one of splenic or hepatic origin. (*b*) Renal tumors grow forward, while abscesses generally point backward. (*c*)

Renal tumors do not descend as much on deep inspiration as do tumors of the spleen or liver. The three cardinal symptoms are hematuria, tumor and pain. The question as to whether a tumor in a given case is operable or not, is of great importance. Much will depend on the length of duration of the symptoms; the mobility of the tumor; the presence of edema in the loin, or in the leg on the affected side; the presence of enlarged glands, which can be felt within the abdomen, or along the brim of the pelvis. A careful examination of all the organs in the body (especially the lower urinary tract) should be made for signs of secondary new growths. The improvement in the operative results following nephrectomy for new growths has gone hand in hand with the improvement in other branches of kidney surgery. The mortality has fallen from 60 per cent. of all cases operated on prior to 1890 to 20 per cent. in 1899." The rarer conditions indicating nephrectomy are not discussed. In conclusion the author calls attention to the importance of early diagnosis as an essential for the most successful surgery.

13. **Sympathetectomy in Glaucoma.**—The following is the summary of the study of the literature by Marple in regard to this operation. "1. That the operation of extirpation of the sympathetic ganglion is a safe procedure in the hands of a skilful surgeon. 2. That (as Ziehe says), while the material is not yet sufficient to reach a positive conclusion as to the permanence of its effect, it is nevertheless established that some of the glaucomatous cases have been improved for some months by resection; in others the condition apparently remains stationary. The results have varied, and one can not yet be sure in what cases it can be advantageously employed. It at least, apparently, does no harm. A considerable number of favorable results have been reported in chronic irritation or inflammatory glaucoma, as well as in simple glaucoma, in which oftentimes pain is abolished. 3. It does not replace iridectomy, but may possibly supplement the latter, in case this is refused or has already resulted disastrously in the other eye, or is contraindicated, as in hemorrhagic glaucoma, dacryocystitis, etc. 4. Until our cases are observed more carefully and for a longer perior of time, it will be impossible to arrive at positive conclusions as to the indications for the operation, or as to its permanent results."

14. **Aortic Stenosis.**—Anders reports a case in which death occurred and discusses the diagnosis and pathology of the condition. He thinks the frequency of the disease has probably been overestimated by the profession. The number of proven cases is small because of the rarity of the occurrence of all the characteristic signs. Conversely their association in the same case enables us to infer safely the existence of the lesion. These signs are: "1, a small, slow and somewhat tense pulse; 2, a systolic basic thrill; 3, an enlargement of the left chamber; 4, a harsh and musical systolic murmur over the aortic area, and a feeble aortic second sound." Certain special features are noted in his cases, viz., the gradual increased intensity of the second sound and the loud and long murmur indicating the vigor of the ventricular systole which supports the generally accepted view that the sonorous vibrations are generated by the eddies resulting from the passage of the blood through a small orifice into a larger channel, as was the case here. The dangers of aortic stenosis are not definitely decided. That there is some risk of sudden death is, the author thinks, unquestioned, even where the symptoms are of a mild character, and he reports cases from the literature where this occurred. It is highly probable that if pure cases only were considered it would prove not to be an uncommon mode of termination in this exceptional lesion.

15. **Diagnosis of Early Pregnancy.**—The points here believed to give valuable signs in the determination of pregnancy are the changes in the cervix which are of some value after the end of the second month, the differential density of the isthmus, the more pronounced softening of the center than of the lateral sections of the segment which is generally well marked by the fifth or sixth week, and is not inferior in value to Hegar's sign. When clearly defined Hegar's sign, that is, extreme compressibility of the isthmus, may be regarded as absolutely diagnostic, as the symptom is rarely counterfeited by any other pathologic condition. Its practical value, he thinks, however, is less than that of the shape and consistence of the corpus because not so readily appreciable. The impregnated ovum lodges most frequently at the point of one cornu and the uterus is thus rendered unsymmetrical. Whether the ovum is contained in the denser or softer segment is a matter of dispute, but there is a difference in the size and tendency of the two halves a few days after the first skipped period. The marked swelling and lateral extension is a point to which it is especially desired to call attention, as it is the most easily available of the signs obtainable in the early months by bi-manual examination. In no other condition than pregnancy is softening so marked, and when pronounced it may safely be taken as proof of normal gestation. It is only after the fifth or sixth week that it is well developed and it disappears again toward the end of the third month owing to the distension of the uterus by the growth of the ovum. These conditions, however, disappear during uterine contraction and repeated examination may be necessary. The complicating presence of myomatous growths and the difficulty thus produced are mentioned and here Hegar's sign and diminished resistance of the median section of the isthmus may serve to differentiate the gravid from the myomatous uterus.

16. **Diseases of the Biliary Passages.**—Brill's article discusses the diagnosis of gallstone diseases in detail, but lack of space forbids a full abstract.

18. **Surgery of Gallstones.**—Much missionary work is necessary in Blake's opinion to secure an earlier diagnosis in the case of cholecystitis and he briefly reports a number of cases which show the lack of this and the danger of allowing the case to go too far before surgical interference. The status of gallstone surgery to-day resembles in many ways that of appendicitis of ten years ago; there is the same delay in diagnosis and the same hesitancy as regards the treatment. With reform in this regard, we will have the confidence in the surgical treatment of gallstones that we now have in that of appendicitis. More interval operations will be done. The question of cholecystectomy or cholecystotomy is discussed. There are several conditions, he says, in which cholecystectomy is the operation of choice. These are: "1, gangrene of the gall-bladder and suppurative inflammations endangering its vitality; 2, neoplasms of the gall-bladder; 3, injuries of the gall-bladder, and 4, permanent obstruction of the cystic duct. In the following conditions it is not so imperatively indicated: (*a*) contracted gall-bladder which can not be attached to the parietal peritoneum for drainage, and (*b*) calculi impacted in the cystic duct which can not be removed except by incising the duct. Cholecystectomy should not be performed in cases in which drainage is indicated, namely, 1, when there is uncertainty as to the patency of the common duct; 2, suppurative cholecystitis without sloughing; 3, cholangitis; 4, when the duct is sutured after choledochotomy and the gall-bladder can be easily and safely drained; 5, it should not be attempted in cases in which prolongation of the operation would lessen the patient's chances, as when jaundice and bleeding are present or there is impairment of vitality by disease, age or condition." As compared with cholecystectomy, cholecystotomy offers the following advantages: 1, a radical cure of the cholecystitis; 2, the avoidance of biliary fistula; 3, a perfectly clean operation with no soiling by infected bile; 4, the avoidance of adhesions. The greater mortality of the operation, he thinks, is due to the serious condition with which it has usually been associated. The only question in his mind is as to whether the gall-bladder serves any necessary principles of economy, and if not, why should we hesitate to remove it?

19. **The Patrol Ambulance.**—Donoghue describes the models of patrol ambulance in Boston and the development of the service, calling attention to the fact that similar methods are practicable in smaller towns large enough to support a hospital.

20. **The Drug Manufacturer.**—The essentials of a sound therapeutic method are given by Loomis as follows: "1, keeping in mind the tendency of self-limitation of pathologic processes and the possibility of cure as a result of natural forces, never

prescribe a remedy that will interfere with, or upset the conservative efforts of, the organism; 2, keep the problem of treatment as simple as possible by the exhibition of few remedies, well selected; 3, bear in mind the possibility of aggravating existing pathologic conditions and introducing new ones, by injudicious or too heroic methods of treatment; 4, remember that the benefit to be expected from remedies is generally offset or neutralized when a large number of remedies are exhibited at the same time; 5, try to remove the cause—this presupposes a careful study of the case, rather than a hasty prescription for this, that or the other symptom; 6, do not forget that most medicines are two-edged swords—if a medicine does no good it is likely to do harm; 7, prescribe for conditions, not diseases; 8, when necessary, hit hard, but not too often; 9, watch constantly for symptoms that may be the result of remedies prescribed for the relief of other symptoms." While more might be included, this is comprehensive enough to show the vicious tendencies that exist at the present time in therapeutics. The drug manufacture, he says, has almost passed the danger point and since its methods are purely commercial, physicians are being misled and mis-educated by it. Therapeutics of to-day are not based on the intelligent mental processes as was the case when the prescribing druggist had more of the business.

24.—This article appeared in THE JOURNAL of May 10, p. 1215.

25. **Disorders of the Knee.**—Gibney reviews some of the more common knee disorders, calling attention to the difference in the etiologic point of view between the diseases of adults and infants. In the latter tuberculosis is an all-important factor. In the former trauma is the most important. He insists on the importance of thorough examination, attention to the gait, and the inflammatory extension through slight injury on the functional action of the joint. He mentions in this connection a treatment which he has found very efficient in pure uncomplicated synovitis. "A strip of adhesive plaster, about an inch in width and long enough to reach two-thirds of the way about the limb, is applied about the beginning of the insertion of the ligamentum patellæ, running obliquely. A second strap crosses this; the third overlaps the first half way; the fourth the second, and so on until the upper border of the synovial sac is reached. No attempt is made fully to extend the limb, and it is left in the slightly flexed position in which it is found. Immediately following this is a roller bandage, used to make the plaster adhere more closely. If there is much pain and other evidence of active inflammation, nothing is better for the next few hours than an ice-bag. Some surgeons who are enamored of this treatment insist on the patient using the limb at once, on the theory that the action of the quadriceps femoris tendon will assist in disposing of the fluid. While this is a tribute to the adhesive plaster method, I can not help but feel that the knee joint is too important for any such experimentation, and, unless a necessity arises for the use of the limb, I prefer to have it used with caution for the next few days. At this time the parts will have shrunken a good deal, and the strapping may be reapplied." Where synovitis is late in developing and depends upon the gradual extension from a localized periostitis or from a detached fringe of the semilunar cartilage or from a subpatellar bursitis, the strapping is merely a factor in the management or an adjuvant, and here immobilization is to be considered and a posterior splint. A plaster-of-paris bandage and crutches are often necessary. Traumatic arthritis is often difficult of diagnosis. A case is reported to illustrate this fact. The physical signs of tuberculous knee are usually pronounced enough, but there are cases, especially where there is a family history of tuberculosis, that are puzzling. As regards rheumatoid affections, he says the rheumatic joints that are complicated by periarthritis involving the soft parts are all, in his judgment, amenable to relief, while those that are complicated by bony deposits, as in arthritis deformans, are very difficult of management. The line of demarcation between this latter disease and rheumatism he thinks is not always well drawn and time may be taken to determine the differential diagnosis. Acute arthritis developed from exposure to cold is closely allied to rheumatism. Mention is made in conclusion of the surgical treatment of gonorrheal rheumatism, but he does not discuss a number of disorders, such as neurosis bursitis, subluxation of the patella, etc., which are omitted for want of space.

26. **The Kidney Complications of Typhoid Fever.**—The complications enumerated by Talley include, 1, albuminuria occurring in a large percentage of cases, usually disappearing early, but sometimes persistent; 2, nephritis, which is comparatively rare, may occur at any stage and is usually of bad prognostic significance; 3, hemorrhagic nephritis, which is not strongly defined from the former type, including under this head the notice of renal typhoid of Amat which the author doubts as a distinct entity; 4, suppurative nephritis; 5, pre-existing chronic nephritis, and 6, hematuria. These are also discussed and a couple of cases are reported, one of acute nephritis co-existent with typhoid and the other of probably old nephritis occurring in a typhoid patient. A tabulated statement is taken from the literature showing the frequency of these complications.

27. **The Justus Test.**—From the examination of a number of cases and a review of some of the authorities, Tucker concludes that the Justus test has no practical value in the differential diagnosis of venereal ulcers as the reaction occurs in an almost equal degree of frequency in the nonsyphilitic conditions with which syphilis may occasionally be confused.

28. **The Justus Test.**—This article by Huger on the same subject as the preceding, gives the result of examination in several cases, and he remarks: "The figures speak for themselves and need very little comment. The number of cases which I report is very few, but there are enough negative results in the group of chancres to show that the test is wholly unreliable, and, moreover, the one positive result among the chancroids detracts even more, because the failure to put a syphilitic on mercurial treatment will soon be proven a mistake, but to condemn a nonsyphilitic to years of, to say the least, unpleasant treatment, and a life-long belief that he has had and perhaps still has, the disease, is unpardonable."

29. **Inherited Tuberculosis.**—Fackler's paper is an interesting study of heredity in tuberculosis and gives statistics that certainly support the importance of inheritance in this disease. Hospital statistics show a much smaller percentage than do those of private practice which he holds to be due to the difficulty of getting good histories, and the deficient intelligence and education of the patients in many cases. He believes that we are justified in assuming that the actual degree of hereditary influence is in excess of that determined by the ordinary statistics. It is claimed by some that at least 50 per cent. of children with tubercular ancestry ultimately become tuberculous unless they succumb to some intercurrent malady. We should give special attention to the prophylaxis, proper education and training of these cases to protect them in the future, if possible. The predisposed individual should have our special care and children should be taught how to live, to love fresh air, to use respiratory and physical exercises and all other means to enrich their bodily vigor. We should also educate the laity as to the importance of heredity and the need of special care in inherited tubercular diathesis.

30. **Pneumonia.**—Nippert reports cases and discusses the diagnosis, symptoms and treatment of pneumonia and offers in conclusion as a summary that repeated and careful physical examination in any case of ill-defined infection is imperative and should not be neglected whenever the complication of pneumonia is possible. The treatment should be dietetic, hygienic and sustaining and drugs should not be administered as routine, but with a positive end in view, and in dose sufficient to obtain the desired result, such as stimulation of the heart's action and prevention of pulmonary congestion and asphyxia. The use of normal salt solution and of oxygen are a life saving addition to therapeutics, but the control of the disease by serum of immunized animals is yet in the experimental stage.

39.—See abstract in THE JOURNAL of March 12, p. 781.

40. Ibid.

41.—Ibid.

42. **Chlorosis.**—Suker reviews the relations of chlorosis and concludes his summing up of the subject as follows: "1. Optic atrophy, papilloretinitis, and pseudo-albuminuric spots can and do have a chlorosis as their causative factor. 2. Double optic atrophy associated with chlorosis may simulate brain tumor to a marked degree. 3. Headaches due to a refractive error and asthenopia are of a severer type and are often aggravated by the chlorosis. 4. Arterial pulsation in the retina is indicative of the severity of the disease, as is also the venous pulse. 5. The fundus lesions in chlorosis are the result of an autotoxemia. 6. The prognosis in nearly every case is favorable, considering the severity of the hemic lesion, excepting in optic atrophy. 7. The foci of fatty degeneration in the retina deserve special attention, so as not to be mistaken for albuminuric spots."

46.—See abstract in THE JOURNAL of January 11, p. 125.

47.—Ibid.

48. **Localization of Mental Faculties.**—From a study of the authorities and cases, some of which are reported, Phelps maintains that the following three propositions are justified: "1. The more absolutely the lesion is limited to the left prefrontal lobe the more positive and distinctive are the symptoms of mental default. 2. The integrity of the mental faculties remains unimpaired in right frontal lesion, though it involves the destruction of the entire lobe, or even extends to the entire hemisphere. 3. The exceptional instances in which seemingly opposite conditions exist are always reconcilable, on more careful examination, with the assertion of an exclusive control of the mental faculties residing in the prefrontal region of the left side. If, then, the same nature and degree of proof which is deemed sufficient for the localization of other cerebral functions may be accepted in case of the mental faculties, their center of control has been established."

49. **Kernig's Sign.**—Sailer reports two cases in which Kernig's sign appeared to be associated with focal encephalitis and was localized on the opposite side of the body. It was also associated in one instance with spastic paralysis and there was also a chronic spasm of the flexor muscles of the arm which, however, did not resemble the Kernig's sign in its mechanism. The most reasonable explanation of the symptom, he thinks, is to ascribe it to an irritable lesion of the pyramidal tract that diminishes but does not destroy its functional activity.

50. **Kernig's Sign.**—Five cases out of 100 examined by Shields, all non-meningitic, showed Kernig's sign; 3 of them were unilateral and 2 bilateral and ceased after recovery, in one case of hemiplegia and one of typhoid fever. The sign persisted in the remaining cases, 2 of right-sided hemiplegia and one of typhoid fever which is unilateral and persistent, though the case of typhoid has not yet recovered and it may disappear.

51. **The Kernig's Sign.**—Clark reports three cases of meningitis, two tubercular, in which this sign was absent and forms the opinion that it is unreliable in tuberculous meningitis.

52. **Lateral Sinus Thrombosis.**—Dench has operated on 22 cases of sinus thrombosis with 2 deaths, one from septic pneumonia and the other from nephritis apparently induced by the anesthetic. In 4 of the cases only was it found necessary to ligate the internal jugular vein and all of these cases recovered. He believes that prompt surgical interference of the most radical kind is the only safe course, and he details his method and reports cases. He thinks it wise in all doubtful cases to resect the internal jugular vein to eliminate the possibility of infection, though he does not prescribe this in all cases. Where the patient has been under observation for a few days and we have a fairly complete temporary record of 24 to 48 hours showing no marked evidence of systemic infection, the surgeon may rely upon simply clearing out the clot in the sinus if it is to be found. This same method should be followed in cases which first come under observation at the time of operation. The sinus can be fairly well cleared out by the curette. On the other hand, in those cases which are first seen at the time of operation and in which the sinus can not be thoroughly cleared and in which also the surgeon is confident that a certain amount of infected material is left in the venous canal, he thinks immediate excision of the jugular vein is demanded. The operation is not a serious one, takes little time, does not endanger the patient by prolonged anesthesia and prevents further systemic infection. The temperature is the only real guide.

54. **Infantile Paralysis.**—Gossage reports cases illustrating the types and reviews the literature as regards the theories of infantile paralysis. It is impossible, he thinks, to come to any definite conclusion as to the nature of the disease. Clinical records are strongly in favor of at least two and it may be three or four definite diseases being included under the term anterior poliomyelitis, namely, "1, that class where the paralysis comes on suddenly without previous ill-health; 2, that class where the onset of the paralysis is preceded by general symptoms, such as fever, vomiting, pain in the back, etc.; 3, the epidemic class, and 4, the adult class. The three latter may possibly be the same disease which may sometimes occur sporadically, and at other times in the form of an epidemic." The one definite fact obtainable from the post-mortem examination of all patients that have suffered from the disease is that there are signs of local inflammation in the ventral horn. The disease, he thinks, is probably caused by some micro-organism not yet isolated. It is possible that there may be two or more specific organisms.

56. **Hepatic Lesions in Infancy.**—From an examination of 270 consecutive autopsies of infants, Wollstein finds that fatty liver occurred most often with suppurative inflammation and, next in frequency, with tuberculosis, pneumonia and the intestinal diseases. Fatty liver is never found in uncomplicated marasmus and is inconstant both in syphilis and rachitis, all cases of which were complicated. In one case there was a hypertrophic cirrhosis and in another there was a similar condition due to obstruction of the bile-ducts in a child of three months which was reported in the *Archives of Pediatrics*, for March.

57. **The Sacrococcygeal Dimple.**—Markoe and Schley's article is mainly the discussion of the literature with description of the conditions. They find transitions from the simple congenital dermoid cyst to the larger and more complex dermoids and to various other conditions, teratoma, etc., and even of true fetal inclusion. Their importance depends on their liability to irritative influences and traumatism. The only real successful treatment is complete and radical extirpation of the whole tract down to the periosteum of the bone as soon as practicable.

59. **Chronic Interstitial Pancreatitis.**—The following are Opie's conclusions: "1. Chronic interstitial pancreatitis is slightly more frequent in males than in females. Two-thirds of the total number of cases occur between the ages of 40 and 60. 2. The most frequent cause of chronic pancreatitis is obstruction of the duct of Wirsung, due to pancreatic calculi, to biliary calculi in the terminal part of the common bile-duct, or to carcinoma invading the head or body of the gland. Duct obstruction may be followed by the invasion of bacteria, which take part in the production of the resulting lesion. 3. Ascending infection of the unobstructed duct of Wirsung may follow an acute lesion of the duodenum or of the bile passages and may cause chronic inflammation. In cases which have given a history of long, persistent vomiting, chronic diffuse pancreatitis may be found at autopsy, and is probably the result of an ascending infection of the gland. 4. General or local tuberculosis is occasionally accompanied by chronic diffuse pancreatitis, affecting chiefly the interstitial tissue of the gland. 5. Chronic interstitial pancreatitis is not infrequently dependent upon the same etiologic factors, notably alcohol, which produce cirrhosis of the liver, and in about one-fourth of the cases the two lesions are associated. 6. Following duct obstruction and ascending infection the lesion affects principally the interlobular tissue, only secondarily invading the lobular tissue and sparing the islands of Langerhans. Diabetes results only when the lesion is far advanced. 7. Accompanying the so-called atrophic or Laennec's cirrhosis of the liver, the pancreas is at times the seat of diffuse chronic inflammation, characterized by diffuse proliferation of the interacinar tissue, which invades the islands of Langerhans. A similar lesion accompanies hyalin degeneration of the islands of Langerhans

and the condition known as hemochromatosis. 8. Interacinar pancreatitis is usually accompanied by diabetes mellitus. When diabetes is absent the lesion is of such slight intensity that the islands of Langerhans are little implicated."

65.—This has appeared elsewhere. See THE JOURNAL, May 17, American abstracts 29 and 45, also this issue No. 70.

67. **X-Ray in Acne and Sycosis.**—Pusey reports a number of cases of acne treated by the *x*-ray with great success and says there is no other affection which proves so tractable, and the results have been produced quicker and with less effect on the tissues than we should imagine was possible. He thinks in such cases the light should be from fairly-soft tubes and only just enough to show a faint green color in the tube. Of course, in treating such cosmetic disorders the danger of producing bad results from the rays must be considered and he warns against using anything but the very weakest light in these cases. He also reports a case of sycosis which did not respond to other treatment, though of moderate severity, therefore the patient was put under the *x*-ray exposure for some time. There was hardly any improvement for over eight weeks and slight dermatitis was produced. The treatment was continued, however, until the dermatitis became acute and alopecia resulted. Rapid improvement in the sycosis occurred in about three months after the beginning of treatment, all evidences of the disease had shortly disappeared and he has had no trouble since.

70.—See No. 65.

72. **Asthma.**—Jack thinks the origin of asthma is to be sought in the state of the blood and he recognizes an asthmatic lymphocytosis, due to a toxemic form of leucocytosis, and an asthmatic anematosis. He holds that the nerves take no part in any of the phenomena of asthma other than the performance of a physiologic duty and supports his view by the facts of blood examinations, etc.

83. **Regenticides.**—This paper of Spitzka's, which is begun in this issue, takes issue with Talbot and Regis as regards the association of regenticide with insanity and, as its title indicates, considers the subject in a statistical manner. He goes over the history of various noted cases, such as the Orsini conspiracy and other historical conspiracies, and he claims that, with the insane taint, the lack of accomplices is rather exceptional than the rule.

86. **Yellow Fever.**—Ross, who is a surgeon in the U. S. Navy, has made experiments in the Las Animas Hospital, Havana, similar to those performed at Quemados, as to the transmission of yellow fever by fomites and calls attention to the following facts in connection with the experiments. They were conducted in the City of Havana itself where yellow fever has run riot for 139 years and in buildings similar in construction and material to those occupied by the people of the poorer classes—damp, poorly-lighted, badly ventilated, floors on the ground, and they also were conducted in the season when the scourge is usually at its worst. The clothing, etc., was taken from thoroughly diagnosed cases and was used by 8 patients all non-immunes, and every possibility of contagion from this source was insured without any results, other sources, of course, being excluded, and he believes that we should adopt the conclusion of the yellow fever commission, as confirmed by these experiments, that yellow fever is not conveyed by fomites and hence disinfecting of articles, clothing, bedding and merchandise supposedly contaminated is unnecessary.

93. **Pre-Historic Tuberculosis in America.**—Among some other interesting facts in regard to Indian medicine and recent Canadian medical folklore, Addison reports that he examined an ossuary near Big Bay Point, in the county of Simcoe, Ontario, in which he found some trephined crania and what was still more of interest, in several skeletons the evidence of Pott's disease. The bones were those of natives of the Huron nation and had undoubtedly been underground over two centuries. He thinks the evidence shows there was tuberculosis among them, not only before the European invasion, but that it was far from uncommon, and that these cases occurred in a nation which was not nomadic, but had permanent places of abode, there being thus a tendency to the accumulation of infective material.

100. **Adrenalin.**—Howard experimented with adrenalin in the treatment of gonorrhea, employing it in solution of 1 to 4000, first flushing out the urethra by urination and then administering the solution, following this with a further washing out with an aqueous one-per-cent. solution of protargol. This has had to be repeated several times in some cases, but a quick cure was obtained in nearly all. In every case the discharge was promptly and markedly lessened. The recovery was with a promptness very unusual in his experience and without complications. He has not felt justified in using the adrenalin alone for he is not satisfied that it has any germicidal value. He has also treated a case of stricture with good results.

101. **Castor Oil in Typhoid.**—The treatment here suggested by Bass, which he has employed in a number of cases, is the giving of quinin and calomel for three or four days to eliminate the possible malaria and after this a dose of castor oil every morning. In no case was high temperature prolonged beyond twenty-five days, except in one where it returned after falling below normal and was quickly reduced by the same treatment. In no case did hemorrhage occur; delirium also subsided, but after every case there was a poor recollection of the events that occurred during the illness. He does not claim a curative effect in typhoid, but thinks that the oil washes and clears out the poisonous accumulations in the intestines which cause an elevation of temperature. The dose should be large enough to act in four to six hours, varying from two teaspoonfuls to two tablespoonfuls according to the condition of the bowels. The oil can be given in sweet milk in a hot cup and then it will be taken with little difficulty.

102.—This has appeared elsewhere. See THE JOURNAL, April 26, p. 1106, No. 13, and May 3, p. 1179, No. 62.

105. **Surgery as a Last Resort.**—Lawrence thinks the tendency to delay in resorting to surgical operations is largely due to prejudice and overconfidence in the recuperative powers of nature and drug action, to failure to recognize the surgical nature of the disease, to the too prevalent use of the term surgery as a synonym for operating, and lastly, to financial considerations. He maintains that some conditions are surgical and should be surgically treated from the start and the question of operation should be determined by the surgeon and not by the practitioner. Last-resort operations should seldom receive surgical sanction. To the lay mind the surgical operation is a surgical operation regardless of the skill of the operator or coöperative power of the patient. The harm done to the living who may be influenced in cases of similar character should always be considered before we stigmatize surgery by operating upon moribund patients. Only rarely should surgical operations be advised or sanctioned where there is not a reasonable hope of the prolongation of useful life or cure in case the patient survives the immediate effects of the operation. No case should be considered too desperate to attempt in which we know, if the patient survives the operation, cure will result.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below.

British Medical Journal (London), May 3.

1 *Signs on the Skin of Certain Common Diseases. James Galloway.
2 *A Case of Chloroma, with Pathologic Report and Some Notes Descriptive of the Disease. G. H. Melville Dunlop.
3 Tuberculosis of the Conjunctiva. Sydney Stephenson.
4 On the Subcutaneous Injection of Paraffin for the Removal of Deformities of the Nose. Walter Downie.
5 On the Spread of Leprosy and an Examination of Fish Hypothesis of Leprosy as Applied to Kashmir. Ernest F. Neve.
6 Case of Epithelioma Complicating Lupus Erythematosus Treated by Scraping and Healed by the X-Rays. G. G. Stopford Taylor.

The Lancet (London), May 3.

7 *The Diagnosis and Treatment of Various Forms of Goiter. James Berry.
8 *The Etiology of Typhoid Fever and Its Prevention. (Concluded.) W. H. Corfield.
9 Note on the Relief of a Distended Joint by the Establishment of Subcutaneous Leakage. T. Pridgin Teale.
10 A Case of Fat-Embolism After Fracture, Where Fat Was Present in the Sputum and Urine. F. A. Southam.
11 *Some Statistics Regarding the Effect of Inoculation Against Typhoid Fever in South Africa. Alexander Crombie.
12 An Undescribed Urinary Deposit: Monohydric Magnesium Phosphate. T. R. Bradshaw.

13 A Case of Ovarian Tumor with Spontaneous Rupture and Edema of the Legs Simulating Malignancy. Smallwood Savage.
14 *"Idiopathic" or Congenital Hereditary and Family Hematuria. Leonard G. Guthrie.
15 Scurvy Developing in a Rickety Boy, Aged 5½ Years. George Carpenter.

Journal of Tropical Medicine (London), May 1.

16 A Theory to Explain How Man and the Anopheles Originally Became Infected with the Malarial Germ. Albert J. Chalmers.
17 Smallpox and Vaccination in Bangkok. P. A. Nightingale.
18 A Peculiar and Undescribed Affection of the Nose. J. C. Mitchell.
19 *Plague Prophylaxis in Formosa. James L. Maxwell.
20 The Duration of the Latency of Malaria After Primary Infection, as Proved by Tertian or Quartan Periodicity or Demonstration of the Parasite in the Blood. (Continued.) Attilio Caccini.

Indian Medical Gazette (Calcutta), April.

21 Notes on the Radical Cure of Hydrocele and Hematocele. W. J. Niblock.
22 Some Notes on Cerebrospinal Fever. Malcolm Moore.
23 The Importance of the Rôle Played by Mosquitoes in Tropical Pathology. W. Glen Liston.
24 A Peculiar Case of Malignant Tertian Fever. G. C. Chatterjee.
25 The Treatment of Typhoid Fever by the Woodbridge Method in India. A. G. Hendley.
26 The Iodin Terchlorid Treatment of Plague. T. K. Gajjar.
27 An Interesting Case of Acute Pneumonia. T. H. Symons.

Annales des Mal. Org. Gen.-Urin. (Paris), March.

28 *Bacteriology of Infections of the Bladder. R. Faltin (Helsingfors).—Recherches bactériologiques sur l'infection vésicale, spéc. au point de vue de la variabilité de la flore bacterienne.
29 *Catheterization of the Ureter and Radiography. De Illyés (Budapest).—Cathétérisme de l'uretère et radiographie.
30 Polycystic Kidney. A. Rivet.—Cas de rein polycystique. Néphrectomie. Guérison.
31 *Absorption by the Bladder. T. Barbarroux (Montpellier.)—Sur l'absorption vésicale.

Presse Medicale (Paris), April 5 to 29.

32 (No. 28.) After-Care of Puerperal Hemorrhage. G. Keim.—Les soins consécutifs aux grandes hémorrhagies puerpérales.
33 Screen to Prevent Burns in Radiography. M. Ménard.—Les brulures en radiographie.
34 (No. 29.) Lèpre et Syringomyélie. H. de Brun (Beyrouth).
35 (No. 30.) Epilepsie et amnésie rétrograde. J. Séglas (Paris).
36 Stab Wound of Liver. L. Loubet (Paris).—Plaie du foie par coup de couteau. Suture. Guérison.
37 Appendicitis from Swallowed Foreign Bodies. Véron (Rennes).—Les appendicites consécutives à la déglutition de corps étrangers.
38 (No. 31.) *Mediastinal Serous Pleurisy. A. Chauffard (Paris).—Des pleurésies séreuses médiastines.
39 La neuronophagie. A. Devaux and P. Merklen (Paris).
40 *Digitalis in Oily Solution for Subcutaneous Injection. G. Rosenthal (Paris).—L'huile digitalique Nativelle injectable.
41 (No. 32.) Prophylaxis of Venereal Disease. E. de Lavarenne (Paris).—Contre la syphilis et les maladies vénériennes.
42 The Apex of the Heart and Its Vicinity. E. Barie (Paris).—La pointe du coeur et la région apexienne.
43 The Accidents of Quinin. A. Martinet.—Quels accidents peut provoquer la quinine?
44 (No. 33.) Preventive Injections of Antidiphtheria Serum in Families. Netter (Paris).—Des injections préventives de sérum antidiphthérique dans les familles.
45 The Milk Question. P. Desfosses (Paris).—La question du lait.
46 Associations with Quinin. A. Martinet.—Associations quiniques.
47 (No. 34.) Autoplasty for Large Wound in Hip and Buttocks. H. Morestin (Paris).—Autoplastie par glissement pour couvrir une plaie très étendue de la hanche et de la fesse.
48 Experimental Carcinosis. L. Bruandet.—Carcinose coccidienne exp.
49 The Antivaccinators. M. Labbé (Paris).—Les antivaccinateurs.
50 The League of Physicians and Families for the Amelioration of Physical and Intellectual Hygiene in the Schools. P. Desfosses (Paris).—Médicins et hygiène scolaire.
51 (No. 35.) *Lumbar Puncture in Treatment of Accidents Consecutive to Fracture of the Skull. E. Rochard (Paris).—De la ponction lombaire comme moyen de traitement des accidents cons. aux fractures du crâne.
52 Technic of Disinfection. A. Martinet.—Pratique de la désinfection.

Progres Medical (Paris), April 19 and 26.

53 (No. 16.) Toxic Amblyopia. F. de Lapersonne (Paris).—De l'amblyopie toxique.
54 (No. 17.) Bovine Tuberculosis. P. Garnault (Paris).—La tuberculose bov. à la Chambre des députés.
55 Variation in Toxicity of Mineral and Organic Compounds. M. Laffont.—Recherches sur les variations provoquées dans la toxicité de certains composés mineraux ou organiques, suivant les groupements chimiques auxquels ils sont liés dans leurs composés solubles.
56 *Hyperthermia. C. H. Petit-Vendol.

Revue de Medecine (Paris), March.

57 *The Nervous System in Consumptives. A. Chelmonski (Warsaw).—L'état du systeme nerv. chez les phthisiques et son influence sur le cours de la tuberculose.

April.

58 *Heredity in Odors. Ch. Féré (Paris).—L'hérédité de l'odeur.
59 Pressure of Pleural Effusions. L. Bard (Geneva).—Recherches clin. et exp. sur la pression des épanchements pleuraux. (Concluded from No. 3.)
60 Peritonitis by Propagation. Véron.—Sur un cas de péritonite par propagation sans perforation survenue au cours d'une fièvre typhoide à forme ambulatoire.
61 Malarial Polyneuritis. C. Mathes.—2 cas de polynévrite palustres.

Revue de Therapeutique (Paris), January 1 to April 1.

62 (No. 2.) Application of Urology in the Clinic. A. Robin (Paris).—L'acide urique, son origine, ses variations et déductions de ces faits pour le traitement et le régime des goutteux.
63 (No. 3.) Treatment of Strictures. E. Desnos.—Traitement des rétrecissements.
64 Two Non-Toxic Analgesics. A. Darier.—Acoine et dionine.
65 (No. 4.) Alkaloids of Opium. A. Morel-Lavallee.—Morphine, héroine et dionine.
66 (No. 5.) Le thermoplasme électrique. J. Larat.
67 (No. 6.) Chloroform Anesthesia. Guyon.—La chloroformisation en particulier chez les cardiaques.
68 *Libby's Method of Treating Otitis. U. Melzi (Milan).—Traitement de l'otite moyenne purulente chron. des enfants par la méthode de Libby.
69 (No. 7.) Treatment of Chron. Diarrhea. M. Soupault and R. François.—Traitement de la diarrhée chron. specialement par l'acide chlorhydrique.

Semaine Medicale (Paris), April.

70 (No. 14.) *Uremic Stomatitis. E. Hirtz (Paris).—Les stomatites urémiques et leur diagnostic.
71 (No. 16.) Leucocyte Count in Diagnosis of Suppurations. Editorial—La numération des leucocytes du sang comme moyen de diagnostic de la présence de pus, et en particulier des suppurations pelviennes.
72 (No. 17.) *Mercurial Treatment of Severe Syphilis. Leredde (Paris).—Progrès à réaliser dans le traitement mercuriel des accidents graves de la syphilis.
73 (No. 18.) *Post-operative Alexia. L. Bard (Geneva.)—Un cas d'alexie d'origine opératoire.

Centralblatt f. Chirurgie (Leipsic), April 26 and May 3.

74 (No. 17.) *Carcinoma and Alterations of the Skin. E. Hollaender (Berlin).—Carcinom und Hautveränderungen.
75 (No. 18.) *The Steam Saw for Resection of the Liver. Koslenko (Moscow).—Zur Frage von der Resektion der Leber mittels eines neuen blutstillenden Instruments (Dampfsäge von Sneguirew).

Centralblatt f. Gyn. (Leipsic), March 15 to April 19.

76 (No. 11.) Vaginal Myotomy. W. Thorn.—Ueber vaginale myotomien und das Verhältniss der Enukleation zur Totalexstirpation.
77 (No. 12.) Double Rupture of Umbilical Vein. R. v. Westphalen (Verny).—Doppelte Ruptur der Nabelvene mit doppelter Hämotombildung bei spontaner Geburt.
78 *Artificial Sterilization of Consumptive Women. A. E. Neumann (Berlin).—Zur Frage der künstlichen Sterilität phthisischer Frauen.
79 Ten Months of Pregnancy. J. Lachs (Cracow).—Die 10 Schwangerschaftsmonate in geschichtlicher Beleuchtung.
80 Gynecologic Phantom. L. Knapp (Prague).—Ein gyn. Demonstrations und Uebungsphantom. (Second communication.)
81 (No. 13.) *Drainage After Symphysiotomy. P. Zweifel.—Die Symphysiotomy mit bes. Drainage des spatium prevesicale sive Cavum Retzii per vaginam.
82 Nickel Stick for Carrying Aseptic Cotton in Cauterizing the Uterus. A. Littauer (Leipsic).—Ein kleines Nickelstäbchen zum Gebrauch keimfreier Watte bei der Gebärmutterätzung.
83 Value of Methylene Blue in Chronic Pyelitis. M. Graefe (Halle).—Fall von groszem Blasenstein nebst Bemerkungen zur Behandlung der chron. Pyelitis.
84 (No. 14.) Vaginal versus Abdominal Myotomy. A. Martin (Greifswald).—Sollen Myome vaginal oder abdominal angegriffen werden?
85 *Behavior of the White Corpuscles in Suppurative Processes in Female Genital Apparatus. Aid in Diagnosing in Gynecology. M. Dützmann (Griefswald).—Das Verhalten der weiszen Blutkörperchen bei eitrigen Processen im Genitalapparat der Frau—Ein diagnostiches Hilfsmittel in der Gyn.
86 Embryotomy on Living Child. G. Zander (Mannheim).—Fall von Embryotomie bei lebendem Kind.
87 (No. 15.) Küstner's High Arc Incision. R.. v. Fellenberg (Berne).—Ueber den suprasymphysären Bogenschnitt nach Küstner.
88 Pfaunenstiel's High Transverse Incision of Fascia. B. Damel (Hamburg).—Ueber den suprasymphysären Fascienquerschnitt nach Pfaunenstiel.
89 Technic of Perforation. F. Skutsch (Jena).—Zur Technik der Perforation.
90 (No. 16.) Urobilinuria in Pregnancy and Its Increase After Death of Fetus. C. Merletti (Padua).—Urobilinurie bei Schwangeren und Vermehrung derselben in Fällen endouterinen Fruchttodes.
91 Childbirth in Advanced Tabes. B. Cohn (Breslau).—Eine Geburt bei vorgeschrittener Tabes dorsalis.

Centralblatt f. Inn. Med. (Leipsic), April 5 to 19.

92 (No. 14.) Estimation of Phosphorus in Phosphorated Oil. P. Gerlinger (Bonn).—Bestimmung des freien Phosphors in Phosphoröl.
93 (No. 15.) Inoculation and Disinfection of Catheters. B. Goldberg (Cologne).—Beimpfung und Abimpfung von Kathetern.
94 (No. 16.) Preservation of Sediments for the Microscope. Gumprecht (Weimar).—Erfahrungen über Konservirung von Sedimenten für die klin. Mikroscopie.

Deutsche Med. Woch. (Leipsic), April 17. Von Leyden Number.

95 Termination of the External Lemniscus. Ramon y Cajal (Madrid).—Die Endigung des äusseren Lemniscus oder die sekundäre akustische Nervenbahn.
96 *Administration of Potassium Nitrate and Nitrite in Case of Chronic Arterial Hypertension. Sir Lauder Brunton (London.)—Ueber die Anwendung von Kaliumnitrat und Nitrit bei chron. Steigerung der Arterienspannung.
97 Multiplicity of Pathogenic Secretions of Single Bacteria. A. Charrin (Paris).—Ueber die Multiplizität der Krankheitserzeugenden Sekrete ein und derselben Bacterie.
98 *Attacks of Irresistible Laughing Accompanied by Tonic Contraction and Pruritus in Left Arm. W. v. Bechterew (St. Petersburg).—Ueber Anfälle von Zwangslachen, begleitet von tonischen Krämpfe und Jucken im linken Arm.
99 Beitrag zur Lehre von der infantilen Hemiplegie. G. Marinesco (Bucharest).
100 *Ueber die Cytodiagnose der Ex- und Transudate. Abstammung und Bedeutung der sogenannten Lymphocyten der tuberkulösen Exsudate. V. Patella (Siena).
101 *Fatal Hemorrhage in Chronic Portal Congestion. H. Curschmann (Leipsic).—Ueber tödtliche Blutungen bei chron. Pfortaderstauung.
102 *"Frosted Heart." H. Eichhorst (Zurich).—Ueber Zuckergussherz.
103 Ein Fall von Pseudomeningitis. J. Donath (Vienna).
104 Pregnancy Icterus. H. Benedict (Budapest).—Zur Kenntniss des Schwangerschaftsicterus.
105 Zur Methodik der quantitativen Indikanbestimmung. H. Strauss (Berlin).

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106 *Genesis of Tuberculosis. H. Ribbert (Marburg).—Ueber die Genese der Lungentuberkulose.
107 *Myasthenie und Ophthalmoplegie. Sir W. B. Gowers (London). (Concluded from preceding number.)
108 Pernicious Anemia. Hamel (Berlin).—Ueber einen bemerkenswerthen Fall von perniziöser Anämie.
109 Treatment of Gastric Ulcer. C. Pariser (Hamburg).—Einige Bemerkungen zur Behandlung des Ulcus Ventriculi. (Concluded from No. 15.)
110 Operative Cure of Case of Chronic Gangrene of the Pharynx. P. G. Krebs (Hildesheim).—Fall von Pharynxgangrän mit chron. Verlauf. Heilung durch op. Therapie.

Jahrbuch f. Kinderheilkunde (Berlin), February.

111 Assimilation in the Newborn. F. Gans (Breslau).—Ueber Nahrungsausnützung des Neugeborenen.
112 Buttermilk in Infant Feeding. B.. Salge (Berlin).—Buttermilch als Säuglingsnahrung.
113 Tracheotomie und Intubation als Stenosenoperation bei Diphtherie. Rahn (Leipsic).
114 *Atrophic Cirrhosis in Childhood. Carl Beck (Heidelberg).—Zur Säuferleber im Kindesalter.
115 Stenosis in Throat from Perforation of Abscess. E. Baumgarten (Budapest).—Kehlkopf und Trachealstenose in Folge von Durchbruch eines peritrachealen Abscesses. Laryngofission und Heilung.

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116 Operative Beseitigung der Intubationsstenosen des Larynx und der Trachea bei Kindern. F. Pels-Leusden (Berlin).
117 Etiology of Meningitis. X. Lewkowicz (Cracow).—Ueber die Aetiologie der Gehirnhautentzündungen und die diagnostische Bedeutung der Lumbarpunction.
118 Carcinoma of Liver in Childhood. E. Schlesinger (Strassburg).—Zur Casuistik des Lebercarcinoms im Kindesalter.
119 Pemphigus Contagiosus bei Masern—Impetigo contagiosa. C. Leiner (Vienna).
120 Erythema scarlatiniform desquamativum recidivans. J. Kramsztyk (Warsaw).
121 Das epidemische Auftreten der Otitis media bei Kindern. J. G. Rey (Aix la Chapelle).

April.

122 *Beitrag zur Statistik der Diphtheriemortalität in Deutschland. E. Mueller (Berlin).
123 *Alexins in Milk and in Infant Serum. E. Moro (Graz).—Untersuchungen ueber die Alexine der Milch und des kindlichen Blutserums.
124 Pneumococcus Suppurations in Joints and Bones. G. Pfeisterer (Basle).—Ueber Pneumokokken-Gelenk- und Knocheneiterungen.
125 Acute Intestinal Occlusion in Children. A. Werthheimber (Munich).—Ueber acute Darmocclusion im Kindesalter.
126 Influenza in Infants. M. Flesch (Frankfurt a. M.).—Ueber Influenza im Säuglingsalter.
127 *Reflexes in Early Childhood. C. Cattaneo (Parma).—Ueber einige Reflexe im ersten Kindesalter.
128 *Some of the Causes of Severe Functional Intestinal Disorders in Infancy. A. Juergensohn (Duenaburg).
129 Rare Ocular Injuries. W. Leitner (Budapest.)—Zwei seltene Fälle von Augenverletzungen.
130 Hemorrhage Resulting from Caries of Temporal Bone. F. Klug (Budapest).—Ueber Blutung der Carotis interna zufolge Caries des Schläfenbeines.
131 Peculiar Post-Pneumonic Condition. S. S. Ladniewski (Lemberg).—Ueber einen eigenthümlichen postpneumonischen Zustand.

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132 *Puncture of the Pericardium. A. Fraenkel (Berlin).—Zur Lehre von der Punction des Herzbeutels.
133 Exercise Treatment of Ataxia. A. Goldscheider (Berlin).—Historisches und Kritisches zur Uebungsbehandlung der tabischen Ataxie.
134 *Influence of Formaldehyd on the Constituents of the Urine. M. Jaffe (Königsberg).—Ueber den Einfluss des Formaldehyds auf dem Nachweis normaler und path. Harnbestandtheile.
135 *Treatment of Acute Nephritis. R. Renvers (Berlin).—Zur Behandlung der acuten Nierenentzündungen.
136 Autodigestion or Autolysis. E. Salkowski (Berlin).—Zur Kenntniss der Autodigestion oder Autolyse.
137 *Treatment of Recent Disturbances in Compensation. G. Klemperer (Berlin).—Zur Behandlung frischer Compensationsstörungen des Herzens.
138 *Treatment of Hemoptysis. Ibid.—Zur Behandlung der Hämoptoe.
139 *The Diet of the Aged. Ibid.—Zur Ernährung der Alten.

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140 Review of 90 Recent Works on the Blood. Zaudy (Duesseldorf).—Bericht über neuere Arbeiten a. d. Gebiete der Physiologie und Pathologie des Blutes.
141 Review of 63 Recent Works on Smallpox and Vaccination. Woltemas (Solingen).—Ueber Pocken und Pockenimpfung.

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142 Stillbirths and General Mortality in Prussia During the Last 25 Years. A. Ruppin (Halle a. S.).—Die Todtgeburten und die Sterbefälle in Preussen im letzten Vierteljahrhundert.

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143 Progress in Pediatrics During 1901. O. Heubner and B. Salge (Berlin).—Bericht ueber die wichtigeren Fortschritte der Kinderheilkunde im Jahre, 1901.

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144 *Experimental Lead Poisoning. L. Jores (Bonn).—Pathologische Anatomie der chron. Bleivergiftung des Kaninchens.
145 Isolated Calcification of Elastic Intima in Arteriosclerosis. J. Matusewicz (Zurich).—Isolirte Verkalkung der Elastica interna bei Arteriosklerose.
146 *Biliary Capillaries in Pathogenesis of Icterus. H. Eppinger (Graz).—Zur norm. und path. Histologie der menschlichen Gallencapillaren mit bes. Berücksichtigung der Pathogenese des Ikterus (Auf Grund einer neuen Farbungsmethode).
147 Retrogressive Alterations in Elastic Fibers in the Skin. F. Katsurada (Freiburg).—Zur Kenntniss der regressiven Veränderungen der elastischen Fasern in der Haut.
148 Löwit's Blood Parasites. Bloch (Berlin).—Ueber die Löwitschen Parasiten der lymphatischen Leukämie und ihre Beziehungen zu den Kernen der Lymphocyten.
149 Anat. and Path. of Seminal Vesicles. S. Oberndorfer (Geneva).—Beitraege zur Anatomie und Pathologie der Samenblasen.
150 Histogenesis of Experimental Tubercles in the Liver. J. Miller (Freiburg).—Die Histogenese des hämatogenen Tuberkels in der Leber des Kaninchens.
151 *Experimental Inoculation with Tuberculosis. K. Watanabe (Freiburg).—Versuche ueber die Wirkung in die Trachea eingeführter Tuberkelbacillen auf die Lunge von Kaninchen.
152 A New Gas-Forming Bacillus. A. Uffenheimer (Berlin).—Bacillus aerogenes aerophilus agilis, nov. spec.

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153 (No. 6.) Cinnamic Acid in Tuberculosis. H. Staub.—Zur Zimmtsäure-behandlung der Lungentuberkulose.
154 (No. 7.) Injuries of the Intestines. Gelpke.—5 Falle von Verletzungen der Baucheingeweide.
155 Cutaneous Tuberculids. R. Zollikofer (St. Gallen).—Ueber die Haut-Tuberculide. (Concluded from No. 6.)
156 Prolapse of Foot in Head Presentation. J. Nadler.—Ueber Fussvorfall bei Schädellage.
157 (No. 8.) Diagnostic Value of Fever in Childhood. G. Rheiner (St. Gallen).—Ueber den diagnostischen Wert des Fiebers im Kindesalter.
158 Deposits of Phosphates and Carbonates in the Skin and Subcutaneous Tissue with the Clinical Manifestations of True Gout. H. Wildbolz (Berne).—Ablagerung von Phosphaten und Karbonaten in Haut und Unterhautgewebe unter dem klin. Erscheinungen echter Gicht.
159 Appendicitis Perforativa in a Femoral Hernia. A. W. Munch.—Ein Fall von App. perf. in einem Schenkelbruch.

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160 *La Variolisation. H. Gros (French Navy).
161 Comenius' Mineral Theory. F. Strunz (Berlin).—Die Mineralienkunde des Johann Amos Comenius und ihre Grundlagen (1592-1670). (Commenced in No. 2.)
162 Bread in Folklore Therapeutics. M. Hoefler (Bad Toelz).—Die Heilbrote.
163 Histoire des prétendus Statuts de la Reine Jeanne et de la réglementation de la prostitution à Avignon au Moyen-Age. P. Pansier (Avignon). (Commenced in No. 1.)
164 Note sur la Médecine en Flandre au XIV Siècle. P. Dotveaux (Paris).
165 *La Peste et Son Extinction par la Sérothérapie. H. F. A. Peypers (Amsterdam).

Gazzetta degli Ospedali (Milan), April 10 to 27.

166 (No. 38.) Function of the Choroid Plexus. E. Cavazzani (Ferrara).—Sulle funzioni dei plessi coroidei nei ventricoli del cervello.
167 Hydatid Cysts in Liver. E. de Renzi (Naples).—Cisti da echinococco del fegato.
168 (No. 39.) Work and Diseases of Sulphur Miners. M. Salvatore (Palermo).—Sul lavoro e malattie degli operai nelle meniere di zolfo.
169 *Research on the Contagiousness of Cancer Undertaken in the Gynecologic Field. L. M. Bossi (Genoa).—Inchiesta sulla contagiosita del cancro eseguita nel campo ginecologico.
170 *Hemostatic Action of Endovenous Injections of Calcium Chlorid. T. Silvestri.—Dell' azione emostatico delle iniezione endovenosi di cloruro di calcio.
171 Paralysis of Facial Nerve from Otitis. U. Melzi (Milan).—Paralisi del nervo facciale da otite media acuta.

172 Fibroma of Soft Palate. U. Martini.—Sopra un caso di fibroma del palate molle associato a polipi nasali—operato per la via del naso.
173 (No. 42.) Meningitis in Infants Consec. to Diphtheria. P. Bacialli (Bologna).—Sulla meningite dei bambini consecutiva a difterite laringea.
174 Tetany in a Case of Gastrosuccorrhea. G. Brunazzi.—Sopra una forma di tetania in un caso di gastrosuccorrhea.
175 Multiple Paralysis and Helminthiasis. G. M. de Luna (Messina).—Paralisi multiple ed elmintiasi.
176 Sympathectomy in Basedow's Disease. G. Tomaselli (Messina).—Contributo alla cura del morbo di Basedow colla simpatectomia.
177 (No. 45.) Diabetes Mellitus. E. de Renzi (Naples).—Diabete mellito.
178 Physico-Chemical Research on the Blood of Fasting Dogs. C. Molon (Padua).—Ricerche fis.-chim. del sangue nel digiuno.
179 Case of Subcortical Aphasia. C. Nardi (Milan).—Supra un caso di afasia sottocorticale o pura di Dejerina.
180 Case of Biliary Pleuritis. A. Montini.—Caso di pleurite biliare.
181 La gonococciemia.—G. Barbiani.
182 Surgical Treatment of Encephalocele. A. Mori.—Contributo alla cura chir. dell' encefalocele.
183 Treatment of Tetanus. G. Viana.—Contributo alla terapia del tetano.

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1. **Skin Eruptions.**—The common recognition of the relation of skin eruptions to general diseases is first mentioned. Galloway then remarks that he can only notice a few cutaneous signs of internal disorder. First, in renal disease, there are many eruptions directly connected with the treatment; measures for producing elimination through the skin producing various forms of sweat rashes, but there is one form seen from time to time, a nephritis in which the skin manifestations are of a different nature and in which the prognosis becomes more grave with the severity of the eruption. The form he refers to is a vasomotor paralysis apparently of the cutaneous capillaries followed by effusion of serum or even of blood into the upper layers of the cutis. This reproduces the various forms of erythema multiforme with exudation, and usually indicates serious renal and blood changes. If well-developed it is a bad prognostic sign. It usually ends in desquamation of epidermis to a greater or less extent and in the severest types it resembles a form of acute exfoliative dermatitis seriously aggravating the later stages of Bright's disease when it occurs. The subject of skin eruptions during diabetes is too extensive to be covered, but one or two features are noticed. It is probable that it is the general diseased condition predisposing to bacterial infection that produces these disorders. There are probably very few eruptions peculiar to diabetes. Special care should be taken in guarding the patient against infection, so as to avoid the very troublesome and even fatal boils and carbuncles which may result. Two interesting conditions, however, to which the diabetic patient is prone, are specially mentioned; one is the circinate scaly eruption generally known as seborrheic dermatitis, which occurs frequently in diabetic or gouty forms of glycosuria. The patients are usually of middle age and frequently too stout. The eruption is sudden in its appearance and it may cause troublesome pruritus and lead to development of eczematous inflammation. The first point in the treatment is to recognize the dietetic element and regulate the diet accordingly, observing the condition of the urine. For local treatment, prompt medicated baths are usually of value, especially weak sulphur baths followed by a lotion containing prepared calamin 20 gr., zinc oxid 15 gr., lime water 1½ dram, glycerin ½ dram, rose water 1 oz.; to this lotion from .5 per cent. to 1 per cent. of the liquefied carbolic acid may be added if there is much pruritus. Special dermatitis and pruritus of the genitalia are also mentioned. It is possible that the starting-point of this irritation is from the diabetic urine. The acid reaction of fermented secretion allows the growth of numerous micro-organisms and aggravates the conditions and finally the disease becomes permanent and incurable. Ulcers resembling chancroids may appear. The treatment of the condition is often satisfactory. It should consist in local washes with mild antiseptic and astringent lotions applied warm, oxid of zinc ointment, warm baths, etc. In antipruritic treatment it should be remembered that the phenazone group of drugs and chloral hydrate are of occasional service. Opium is of little value, but the diet should receive attention to regulate the general condition. Finally, Galloway mentions a class of disorders seen in what he calls persons with low tension circulation, consisting in a sort of vasomotor paralysis of the capillary system and with this a tendency to the aggravation of conditions after infections when they occur. There may be no organic disease of the heart detectable, but as a rule, the pulse rate is probably less frequent than normal. In some severe cases tachycardia very exceptionally occurs. There is one point of considerable importance in connection with this type of circulatory skin disease. Its resemblance to certain so-called tuberculids of the skin, such as necrosis, with scar with a minimum amount of ulceration when the infiltration is small as from the occurrence of passive localized congestion or the occurrence of a general amount of sometimes great cellular infiltration of the cutis. As an example of the first type of these we may take what is called necrosing dermatitis of the extremities and acne scrofulosorum, and of the latter the condition known as erythema induratum scrofulosorum or Bazin's disease. The resemblance of this diabetic form of skin disorder with these tuberculids may lead to serious mistakes in diagnosis. As regards treatment, the author dwells on the importance of general hygienic and dietetic measures, keeping the patients in the best condition of nutrition, the skin in the best order by scrupulous cleanliness, by frequent warm baths, careful drying of the skin, and the use of warm and well-fitting clothing. Patients who are seriously affected suffer much inconvenience, become very much depressed and require tonic treatment. In the mild cases the use of cardiac and nerve tonics, especially digitalis and strophanthus and strychnin, either in combination or alternately, produce very gratifying results.

2. **Chloroma.**—Dunlop reports a case which he thinks is the first that has been diagnosed *intra vitam*, and discusses the pathology of the condition. He thinks these tumors generally belong to the type of lymphosarcoma and the color, he thinks, is probably due to some chemical product allied to lipochrome, hitherto undiscovered, which on exposure to light becomes oxidized and in the process of oxidization loses its color. The tumors originate from the periosteum of the head and face and those met elsewhere are secondary forms. They invade the cavities of the skull, the marrow of the bones, and the internal organs having a very rapid generalization and multiple metastases in the body. Their consistence varies considerably. Microscopically they are found to consist of large round or oval-shaped cells with numerous nuclei, and occasionally nucleoli, imbedded either in an intercellular amorphous material of a very clear and transparent character or in a delicate network, or in other cases the tumor is interspersed by coarse bundles of connective tissue forming lines of demarcation. In the midst of this network granules with highly refractive properties are found lying in and between the cells. It is chiefly a disease of children and adolescents, occurring more frequently in boys than in girls. Its close resemblance to leukemia is pointed out by Recklinghausen and Dock. The exophthalmos is one of the most usual things in chloroma and a similar condition has been described in several cases of leukemia. In both anemia is present with petechiæ, extravasation under the skin, epistaxis, and conjunctival and retinal hemorrhages. There is a very striking lymphocytosis and a remarkable diminution in leucocytes. Dock is of the opinion that it stands between ordinary cases of leukemia and those described by Ebstein as acute leukemia and that there is strong evidence in favor of new growths found in chloroma being the source of lymphocytes as there is of the thymus, bone marrow and spleen being their source in leukemia. The termination is invariably fatal from exhaustion, the average duration not over five or six months.

7. **Goiter.**—Berry describes the different forms of goiter, first the parenchymatous, the common type observed in young people, tending as it grows old to become fibrosed. The second class, encapsulated form often unilateral and one of the most common types seen in Switzerland and Derbyshire, and may be compared to the common adenomas of the breast or to the encapsulated fibroids of the uterus. A common secondary change in these cases is fibrosis, the tumor being converted into a mass of fibroid tissue. Generally it springs from the lower part of one lateral lobe and may cause serious embarrassment by

pressure on the trachea. Sometimes it may be complicated with the parenchymatous form and it may be multiple. When other means of diagnosis fail between these two types it would be well to administer iodin or thyroid extract for a time. If the goiter is of the parenchymatous type it will probably disappear or lessen in size with this treatment, while if it is an encapsulated tumor it will be unaffected. It is a good idea, however, to use such medical treatment before attempting operation in any case as the parenchymatous goiter existing around the tumor will be decreased and the tumor lessened and its enucleation facilitated. The exophthalmic variety is briefly mentioned; it is of far more serious importance than an ordinary parenchymatous goiter, for which it may be mistaken. Persisting rapid pulse being present with a uniform enlargement of the thyroid should raise a strong suspicion of this disease, though these symptoms are not always absolutely pathognomonic. Malignant disease does not usually present any great difficulty in diagnosis and seldom occurs before the age of 40 and the general rule is that when in a thyroid gland of a person over 40 years of age a hard tumor exists, steadily and rapidly increasing in size and not of inflammatory nature, malignancy should be suspected. A nodular, lumpy character of tumor also is an aid to the diagnosis as well as its hardness, but there is a form of sarcoma which is quite soft, and the steady and rapid growth and nodularity are the most characteristic features. A special form of malignant disease of the thyroid which runs a much slower course is a papilliferous cystic tumor extremely suitable for operation. Another unusual form is what is called malignant adenoma. This is likely to disseminate itself generally. It includes a number of distinct forms. As regards the treatment of goiter he mentions the importance of investigating the drinking water as most cases of the parenchymatous form of the disease are probably dependent on this. Iodin and thyroid extract are the principal drugs to be used. The operative treatment of goiter is confined largely to the malignant or encapsulated forms. Enucleation is suitable only for encapsulated tumors. If the operation is performed on suitable cases it is almost devoid of danger, the safety depending on the diagnosis. In the great majority of cases of parenchymatous goiter no operation at all is desired and it should not be done for mere deformity. In only dyspnea of a serious nature has it an excuse. As regards exophthalmic goiter, Berry condemns operation absolutely. Malignant disease is seldom seen early enough to permit of any operation, and whenever it is attempted considerable difficulty should be anticipated. If it can be done in its very early stages it is not a serious proceeding, and presents little difficulty.

8. **Typhoid Fever.**—The concluding portion of the third lecture of Corfield reviews the various methods of contamination and direct contagion of which there is some evidence, and the air-borne typhoid in various ways. He notices the vitality of the germ in the soil, showing that it may live for an indefinite period under favorable conditions and the element of soil infection must be considered. In the conclusion of his paper he gives some tables showing that the rate of mortality in England, Wales and the city of London has decreased each semi-decade from 1870 to 1900.

11. **Inoculation for Typhoid.**—Crombie's article gives a tabulated statement of the result of inoculation in certain detachments of troops during the South African war. It does not seem to point to any great value of the method. He remarks, as of general interest, that a medical officer found six months after inoculation that his blood gave a well-marked agglutinin reaction, and a fortnight afterward he was in bed suffering from enteric fever, showing that the presence of agglutinin is no guarantee of the alexins. His deductions are incomplete, but he offers them as a contribution preliminary to the completion of official statistics on a large scale which he hopes will be possible after the conclusion of the war.

14. **Hematuria.**—The characteristics of idiopathic hematuria as shown by cases and summarized by Guthrie are: "1. It is hereditary, familial and congenital. 2. The hematuria may be persistent for many years but may vary in extent. In some cases it may cease for a time, but in all it is apt to recur or to increase in paroxysmal attacks or exacerbations. For instance, in one of my cases the urine examined almost weekly for upward of two years has never failed to contain blood visible to the naked eye and give a marked reaction with ozonic ether and guaiacum. Its color varies from that of old gold tinged with red to the bright scarlet of oxyhemoglobin. In another, blood is always present but can only be detected on microscopic examination, except when exacerbations occur. At these times the urine may resemble almost pure arterial blood. It is not "smoky" in appearance, but is "red," the color being due to oxyhemoglobin, not methemoglobin. Normal red blood corpuscles and blood casts can always be found under the microscope; so that the color is not due to hemoglobinuria. The amount of blood passed during exacerbations is always far greater than is ever seen in cases of nephritis and resembles in profuseness the blood passed in the cases of renal calculus or new growth. 3. All cases are liable to paroxysmal exacerbations of hematuria which are usually accompanied by slight pyrexia, malaise, headache, vomiting, and slight pains in the back or limbs. The exacerbations are often attributed to "catching cold" and are associated with slight bronchial catarrh, or with trivial ailments, such as toothache, earache or tonsillitis. In some cases articles of diet, such as black currants, asparagus, strawberries, claret and perhaps rhubarb, have been held to produce them. But the exacerbation may occur without complications and in the absence of special causes. The duration of these exacerbations is usually several days, but seldom exceeds a week or at most a fortnight, and after the first few days the blood gradually lessens in amount. They have no law of periodicity or of frequency. They may occur at intervals of weeks, months or years, but they appear to become less frequent after the first decade is passed. They occur with extreme suddenness by day or by night and are not influenced by posture. Extremes of hot or cold seem to give rise to them. 4. Idiopathic hematuria is not associated with edema nor with ascites nor with the cardio-vascular changes following ordinary nephritis. Except at times when exacerbations occur the subjects appear to be, and are, in perfect health. They may be temporarily anemic after an exacerbation, but it is not profound or lasting. 5. The hemorrhage is not due to the presence of uric acid or oxalates. A few crystals of these substances may often be found on microscopic examination, but free gravel is never passed, neither is there any excess of uric acid in solution. The amount of urea passed is normal. 6. The specific gravity of the urine is not unduly low. It varies from 1015 to 1030. The quality of urine passed is not above or below normal. The reaction is acid or neutral. The urine is nearly always albuminous, the albumin varying from one-twentieth to one-fourth of its bulk. Sometimes it is in accordance with the amount of blood present, at others it exceeds it. Nucleo-albumin is usually passed as well. The sediment nearly always contains free normal red blood corpuscles and tubular blood casts in more or less abundance, but never hyalin casts. Finally, none of the subjects of idiopathic hematuria is a 'bleeder.' One of them recently had some adenoid vegetations removed and the hemorrhage caused was neither profuse nor prolonged. None of them suffers from Raynaud's disease or from purpura. Scarlet fever can be excluded as a cause in all cases and also calculus, new growth, congenital syphilis, renal tuberculosis, and all forms of nephritis. The kidneys are not movable, palpable, nor tender, and there is no definite nor constant local pain." A report of the cases follows. He remarks in conclusion that the explanation of this mysterious disorder is still to be discussed. The fact that the hematuria is congenital excludes all the ordinary known causes. The most reasonable supposition is that there is some inherent weakness or varicosity of the walls of the renal vessels leading to what may be called renal hemophilia, or renal epistaxis. The vasomotor system may be at fault, in which case the complaint might be grouped with cyclical or postural albuminuria, but in this case it is not postural. This class of exacerbations occur as often during the night in bed as in the daytime. The diagnosis rests on the personal and family history; on the occurrence of febrile exacerbations in which the hematuria far exceeds that of acute nephritis; on the absence of edema, dropsy and cardio-vascular changes, and

finally, on the absence of any of the well-known causes of hematuria.

19. **Plague.**—Japan seems to have successfully met plague in Formosa by inoculation with Kitasato's serum and Maxwell gives an account of the method. The operation is very simple and painless and inoculation is made compulsory by the authorities. He has attended a good many cases of plague but only came across two cases in inoculated persons, in which one was so mild that the patient was hardly laid up. In the other it was most severe, but the inoculation had only been performed once. He says, to sum up, the method is easily applied, causing a minimum of discomfort and a very large reduction has been made in the numbers attacked by plague in Tainan and a decided reduction in the number of deaths among those attacked.

28. **Bacteriology of Infections of the Bladder.**—Faltin states that the bacteriology of the bladder is very variable. The colon bacillus is found more frequently in chronic than in recent infections, and the urethra is usually the route of infection. This bacillus does not seem to be antagonistic to other flora except to certain staphylococci, but the pyocyaneus displays a tendency to smother or drive out of the bladder all other microbes.

29. **Catheterization of the Ureters and Radiography.**—Tuffier first suggested the practicability of inserting a metal guide in the ureter catheter for the purpose of radiographing it. De Illyès claims that he was the first to act upon this suggestion, and reported his results at a meeting of his local medical society, April 13, 1901. In his first case he was able by radiography to exclude the kidney as the source of a tumor which could be palpated in the abdomen, and also to determine the movability of the spleen. In the second case he was thus able to diagnose and locate a renal calculus. The shadow cast by the stone was so faint that it did not attract attention until the radiograph showed that the tip of the catheter was abruptly arrested at this point. Microscopic crystals also emerged through the catheter, and its application allowed the escape of a collection of pus above the calculus, followed by the subsidence of the fever. Small calculi can be made to cast a distinct shadow by exposing only a limited area to the rays, not more than 2.5 cm. at a time, thus excluding the reflected rays. The stones can be located by a radiograph of the catheter as above, and then by exposing the exact spot, they will cast a good shadow. Displacement of the kidney can also be diagnosed by this means. In one case the catheter was arrested close to the kidney. No fluids escaped and there was no evidence of retention in the pelvis. These findings indicated that the tumor palpated was really in the kidney and that the catheter was arrested by the mass of neoplasm which had replaced the true kidney tissue. In his fifth case a young pregnant woman had noted for two years a movable tumor in the right hypogastrium as large as a fist. It was held firmly by an assistant and a radiograph of the catheter in the ureter showed that it passed directly into the tumor which was thus differentiated as a movable kidney. The intestines must be thoroughly emptied before undertaking catheterization for this purpose. Illyès administers a purgative two days before and allows only liquid food. He uses a fine silver guide 1 to 3 mm. in diameter, but suggests that all possible danger might be averted by filling the catheter with bismuth instead of using a stiff guide.

31. **Absorption by the Bladder.**—Barbarroux states that the mucus in the bladder interferes with absorption by the epithelium; any measure which removes the mucus, irrigation or instillation of a dissolvent, favors absorption. On the other hand, introduction of a substance which precipitates the mucin retards absorption. When the epithelium is altered in its structure, absorption proceeds more rapidly, but simple inflammation diminishes the absorbing power of the organ on account of the enhanced secretion of mucus. The walls of the bladder have no specific absorbing apparatus, but under certain circumstances they allow the passage of some substances, even of the urinary excreta.

38. **Mediastinal Serous Pleurisy.**—Chauffard illustrates two typical cases of pleurisy with an effusion collecting in the mediastinum in the shape of a vertical band or prolonged at the bottom in the shape of a carpenter's square as the diaphragm becomes involved. These forms of pleurisy are rare and peculiarly insidious. They may be discovered by radiography or physical exploration or they may be masked by the "mediastinal syndrome." One of the four cases he has had occasion to observe occurred in the course of typhoid fever and the large effusion in the right mediastinum soon entailed the compression of heart and lung, but the patient recovered without evacuation of the fluid. He was able to find only eight cases previously recorded. The serosa of the mediastinum is first affected in these cases, then of the diaphragm, and finally the pleural cavity. As the latter becomes involved the inflammation of the other serosæ subsides.

40. **Oily Solution of Digitalis for Subcutaneous Injections.**—Rosenthal quotes numerous writers to the effect that in many cases the administration of digitalis by subcutaneous injection would be a great advantage over the ordinary method. The objection hitherto has been that the alcohol or chloroform, etc., in the solutions used has made the injections painful and entailed abscesses and even necrosis. He has now obviated these objections by the production of an oily solution which is stable and especially adapted for injections of this kind. It contains one-eighth of a milligram of digitalis to the cubic centimeter, and extensive tests on animals have confirmed its efficacy and absolute harmlessness. None of the patients who have been injected with it showed any tendency to inflammation or induration at the point of the injection.

51. **Lumbar Puncture After Fracture of the Skull.**—Rochard followed Tuffier's suggestion in regard to lumbar puncture as a means of diagnosing a fracture of the skull, and tried it on two patients. The escape of even a small amount of cerebrospinal fluid aroused the patients from their stupor and recovery was soon complete. Lumbar puncture has therefore direct value as a means of relieving and aiding recovery from injuries of this kind, but as even slight contusions are sufficient to induce more or less extravasation of blood, it has no diagnostic significance. Others have recently reported the relief of severe headache by this means, especially syphilitic cephalalgia.

56. **Hyperthermia.**—Petit-Vendol reviews three cases of sudden attacks of hyperthermia which have been published since 1898 and urges more detailed descriptions of such experiences. The physicians were inclined to attribute the hyperthermia to a nervous origin. The high temperature appeared suddenly in each, without affecting the general health or spirits or even the pulse, and with no explanatory signs. The physician at the first attack in one case merely supposed that his thermometer was out of order.

57. **Nervous System in Consumptives.**—Chelmonski has found symptoms of neurasthenia, hysteria or of both combined in nearly every consumptive examined. He thinks that the nervous system should be considered in the treatment of tuberculosis more than of any other chronic disease.

58. **Heredity in Odors.**—Féré describes the case of a woman who noticed the complete suppression of the odors of the cutaneous secretions at the moment of fecundation. It occurred regularly in her five pregnancies, also in her mother's three and her sister's two. The family were always able to determine the date of fecundation from the cessation of the odors, and their reappearance announced the return of the menses. The only similar occurrence which Féré has found recorded is Morren's statement that the fragrant orchids, such as the Marillaria aromatica, lose their perfume in half an hour after artificial application of the pollen, while the non-fecundated flowers retain their perfume for a long time.

68. **Libby's Method of Treating Otitis.**—Melzi first cleans the ear with or without hydrogen dioxid and then insufflates acetanilid according to the directions of G. Libby of Portland, Me. He is very enthusiastic in regard to the value of this method of rapid cure.

70. **Uremic Stomatitis.**—Hirtz points out that the differentiation of uremic stomatitis may often clear up the diagnosis

of the uremia. The physician should seek for the stomatitis in all cases of uremia. Treatment should be addressed to the latter, German brandy, dry cupping and possibly venesection to aid in the elimination of the toxins. The mouth should be rinsed with a solution of boric acid, permanganate or better still, hydrogen dioxid which has a marvelous action on the anaërobic microbes which swarm in these cases. As a collutorium, potassium chlorate, iodin or lemon juice will be found useful. The prognosis is grave on account of the uremia of which it is merely the expression, but a cure is possible. The stomatitis may be erythemato-pultaceous or more rarely merely ulcerative. The ulcerations may be diffuse but they have always spared the tongue, tonsils and pharynx in the cases known to date. Barié states that 900 gm. of saliva were excreted by one of his patients.

72. **Progress to be Realized in Treatment of Severe Syphilis.**—Leredde urges that the severe manifestations of syphilis should be treated by mercury alone, and that the current doses should be considerably increased. If the teeth are in good condition there is no danger of stomatitis. The physician should not wait for the appearance of the severer manifestations of syphilis to demonstrate that his doses have been inadequate, but should start at once with large doses, when the ordinary methods of treatment have proved ineffectual. Inunctions of 4 gm. of mercurial ointment are altogether insufficient for a syphilitic exhibiting symptoms of nerve involvement. Without waiting for paralysis or tabes to appear, the physician should administer in subcutaneous injection 3 to 4 cg. of the cyanid or sublimate or 6 to 8 cg. of the weaker salts, the benzoate or biniodid. These doses can even be increased if necessary. An injection twice a week of 7 to 10 cg. of calomel might be tried. These doses are calculated for a robust man. For women they should be reduced about 25 per cent. The parasyphilitic affections are generally curable if treated on these principles, but not if the ordinary methods of mercurial treatment are followed.

73. **Postoperative Alexia.**—Bard describes a case of assumed traumatic epilepsy in a man of 56 who insisted upon an operation as a last resource. His condition was not improved in any way by the intervention and total alexia supplanted the partial previously observed. Bard emphasizes anew the dangers of functional aggravation of the condition by surgical intervention on a region of the brain evidently already thrombosed and in which the circulation is already profoundly compromised.

74. **Carcinoma and Alterations of the Skin.**—Hollaender called attention two years ago—as THE JOURNAL mentioned at the time—to the frequency of red spots, warts and pigmented patches on the skin of persons with incipient or developed carcinoma. He considers them premonitory symptoms of an impending internal cancer. The red dots are angiomata and may be the size of a pinhead or bean, but are usually still smaller. They occur in the midst of sound skin, and project a little above it. These little formations, of course, occur frequently in healthy persons, but not with the suddenness, the constancy and in the numbers observed in case of malignant neoplasms. There is also a tendency to warts and to pigmented patches like large freckles. The latter occur usually on the covered portions of the body and are most numerous in the vicinity of the cancer, especially in case of cancer of the rectum. He ascribes the greatest diagnostic importance to this member of the triad, but considers the combination of the three a most significant and valuable sign of impending cancer, especially in the comparatively young.

75. **The Steam Saw for Resection of the Liver.**—Koslenko describes Sneguirew's instrument as a saw, hollow through the handle to the tip, with a small opening between each tooth of the saw. It is connected by a rubber tube with the steaming vessel and, as it saws, the steam penetrates directly into the cut tissues without injury to the operator or to any other part of the tissues. Tests on the livers of dogs showed that the steam saw enables the liver to be resected in any direction without the danger of hemorrhage. In case a large vessel is severed, the steam can be applied in a large jet to the spot or turned off and the vessel ligated. There was no secondary hemorrhage after resection in this way, and the wound in the liver healed by granulation with formation of considerable connective tissue. He expresses, in conclusion, his anticipation that steam will be found as effective a hemostatic in surgery of the parenchymatous organs as it has proved in gynecology.

78. **Artificial Sterilization of Consumptive Women.**—Neumann's further experience has confirmed the efficacy and harmlessness of his method of preventing conception in phthisical women. The point of insertion of each tube in the uterus is drawn out in turn through a buttonhole in the peritoneum, and a wedge-shaped piece excised. Very little chloroform is needed. Menstruation is retained, while conception is absolutely prevented.

81. **Drainage After Symphysiotomy.**—Zweifel describes five cases in which he secured aseptic healing under the usual adverse circumstances by draining through a channel pierced through the labium on one side, below the corpus cavernosus clitoridis. The drain tube thus emerges on the outside of the labium majus, and all danger of infection from the lochia is averted. He thinks the certainty of aseptic healing guaranteed by this method of drainage will remove the principal objection to symphysiotomy.

85. **Behavior of White Corpuscles in Suppurative Processes in Female Genital Apparatus.**—Dützmann reports that the blood count in the twelve patients examined showed invariably an increase of white corpuscles in case of suppuration. Any retention of pus sends up the number of leucocytes. In one case every sign indicated carcinoma, but the whites numbered 16,400, and the patient recovered after the suppuration indicated by this increase had been discovered and evacuated. The number of white corpuscles in some of the cases which he tabulates was 17,800, 31,300, 15,900, 18,200 and 12,100, with temperature of 36.8 to 38.6 C. In other cases the white corpuscles numbered 9600 and 9900, with temperature of 37.5, and the course of events disclosed the absence of pus and the sarcomatous nature of the tumor. He says that the sign never failed, and he proclaims that we have in the blood count a most valuable aid for the differentiation of gynecologic affections. [Küttner observed at the recent German Congress of Surgery that a complication may be suspected when the ordinary transient postoperative leucocytosis persists. On the other hand, a decrease in the number of leucocytes in these conditions indicates an aseptic fever. Curschmann proclaims that the blood count and leucocytosis are more valuable means of determining the existence of suppuration than the thermometer.—ED.]

96. **Potassium Nitrate and Nitrite in Chronic Arterial Hypertension.**—It is very important in cases in which the arteries have lost more or less of their elasticity to control the resulting arterial hypertension and avert the rupture of a cerebral artery. The continuous use of .03 gm. of nitroerythrol three times a day will prevent in many persons attacks of angina pectoris, but to ward off cerebral hemorrhage there is need of a drug less powerful but more permanent in its action. This effect is attained by the old-fashioned remedy, saltpeter. The reason why it has been discarded of late years is possibly due to the improved methods of manufacturing which have eliminated the really effective principle. Years ago Brunton was told by a physician with a marked tendency to gout that he had been able to keep himself free from attacks of gout for years while all his relatives suffered severely from them. He attributed his escape to his practice of drinking every morning 1.8 gm. potassium bicarbonate and 1.2 gm. potassium nitrate in a pint of water. He kept it up for thirty to forty years. He had noticed that the saltpeter which he purchased from a powder manufacturer was much more effective than that obtained from the druggist. Brunton had had a similar experience with a patient 65 years old who suffered from severe hemorrhages from the nose recurring several times a day. He prescribed the above combination in a large glass of water

every morning. The effect was like magic. The hemorrhages ceased at once, but when the patient returned to the city, he found that the saltpeter which he bought from an apothecary cost him six times as much as that which he had previously been purchasing from an oil dealer, while it had absolutely no therapeutic effect. This suggested that the cheaper article contained impurities—possibly nitrites—which were probably the effective agents. The prescription was therefore altered to potassium bicarbonate, 1.8; potassium nitrate, 1.2; sodium nitrite, .03. Potassium nitrite would have answered the same purpose, but is less frequently kept in stock. This combination worked the same as that purchased from the oil dealer, The potassium salts are said to have a paralyzing action on the heart. This effect is desirable in cases that require less energetic heart action and increased permeability on the part of the arteries, thus reducing the pressure at both ends. All the nitrites have the property of expanding the small arteries and thus diminishing the blood pressure. Leach has demonstrated that the nitrates have the same property, but act much slower and more gradually. The combination of the nitrates and nitrites therefore regulates the hypertension by moderating the heart action and dilating the vessels, and has besides this, an unmistakable diuretic action which sweeps out of the system certain substances that probably have an irritating and constricting action on the blood vessels. A high blood pressure is found not only in the aged whose vessel walls have become inelastic, but also to a certain extent in kidney affections and especially in the so-called gouty kidney. If this treatment is instituted in time, before anatomic alterations have occurred and while a much accentuated aortic sound is as yet the only symptom, angina pectoris and cerebral hemorrhages can be warded off and the patients long survive.

98. **Attacks of Irresistible Laughing Accompanied by Tonic Contraction of Left Arm.**—Bechterew assumes the existence of an organic affection of the basal portion of the right hemisphere from the symptoms observed in a case which he describes. The attacks began with a brief spasmodic contraction in the left arm, followed by intense pruritus and incessant laughing for nearly a minute. Left hemianopsia and hemioptic pupil reaction were also observed. The impulse to laugh developed as the contraction in the arm disappeared. There was no vertigo nor loss of consciousness. The laughing had the character of the reflex laughing induced by tickling, with none of the characteristics of epilepsy.

100. **Cytodiagnosis of Exudates.**—Patella denies that the lymphocytes found in tuberculous effusions can be derived from the blood as Widal and others claim. They are distinguished by the difference in size, irregular shape, and the regular and intense staining with hematein in inverse proportion to their size. He states that fresh tuberculous effusions always contain endothelial cells and that the nuclei of these cells are liberated as they degenerate and are what have been assumed to be lymphocytes. Almost the only information to be derived from them is in regard to the age of the process, as they are not peculiar to tuberculous exudates and transudates, but are liable to occur also in those caused by the diplococcus.

101. **Fatal Hemorrhage in Chronic Congestion of the Portal System.**—Curschmann has paid especial attention to the coincidence of chronic congestion of the portal system with varicose enlargement of the veins of the lower esophagus and in all his experience since 1876 has never missed it. Thirteen of the patients died from excessive hemorrhages. In 12 the varices were apparently the result of Laennec's cirrhosis; in one they had developed consecutive to a syphilitic affection of the liver. The hemorrhages in these cases were usually abundant and occurred without appreciable traumatism, but the autopsy disclosed an ulceration. In a recent case described at length, a man of 32 with no symptoms of stomach trouble vomited and voided blood occasionally, and the blood indicated pernicious anemia. The liver was small and hard, the spleen enlarged. The autopsy revealed the anticipated cirrhosis and the entire absence of fluid in the abdomen and of meteorism. The source of the hemorrhage was in the stomach, in a varix. The veins were enormously enlarged, with direct communication with the enlarged left suprarenal and other enlarged veins of the region. This varicose anastomosis between the portal and vasa brevia, which had long preceded the fatal hemorrhage, had been able to compensate the cirrhosis and prevent ascites and distention of the intestines. The cirrhosis in this case, therefore, had existed for a long time and led to a fatal termination, before the characteristic signs of portal congestion had developed.

102. **"Frosted" or Zuckerguss Heart.**—Curschmann described a few years ago a diffuse fibrous thickening of the capsule of the liver which gave it the appearance of frosting on a cake. Eichhorst states that this phenomenon is not confined to the liver alone. He has observed it several times on the spleen and recently on a heart. The appearance of the organ in this case could not be more aptly described than by the term "frosted." The patient was a woman of 40, healthy except for an attack of enteric fever twenty, and a brief attack of acute articular rheumatism five years before. She was suddenly seized with symptoms of insufficiency of the heart muscle, which subsided under treatment in a few days, but recurred again and again, ending fatally in six months. The fibrous thickening was restricted to the epicardium. It evidently interfered with the movements of the heart muscle in both systole and diastole, but the muscle was apparently normal. The patient had probably been addicted to alcohol.

106. **Genesis of Pulmonary Tuberculosis.**—Ribbert presents evidence to sustain his assertion that hematogenic tuberculosis settles by preference at the apices. This point has a defective circulation and is frequently compressed by the premature ossification of the first costal cartilage as Freund has recently pointed out. Still another factor in the localization of the bacilli at this point is the defective ventilation of the lung here, which does not sweep away the bacilli entering the lungs from the blood. Tuberculosis of the bronchial and tracheal glands is in the largest majority of cases derived from the apex of the lung. It is possible but by no means proved that tuberculosis of the apices may be traced to inhalation of germs. It is far more probable that it is of secondary origin. The primarily infected gland does not afford favorable conditions for the proliferation of the bacilli and they die and the gland heals, unless the bacilli are very numerous or the subject is predisposed to tuberculosis. Prophylaxis should aim, therefore, to cure the infected gland before the germs pass into the blood in sufficient quantities to entail the tuberculous process elsewhere, which almost invariably locates at the apex.

107. **Myasthenia and Ophthalmoplegia.**—Gowers describes three cases exhibiting the symptoms which we are accustomed to attribute to myasthenia, weakness of the limbs, moderate exhaustion of the muscles connected with the eyeball, some ptosis and weakness of the other muscles of the eyes, as well as of several of the muscles innervated by the facial nerve, the zygomatic muscles in particular. This caused a characteristic expression during laughing. The symptom of this "nasal smile" not only suggests the diagnosis but explains to a certain extent the pathology, as the muscles involved are those affected in muscular dystrophia. He was able to keep his patients under observation for years and the symptoms maintained their mild character, which speaks against a toxic origin. The results of electric tests of the muscles suggest that the affection is limited to the muscle fibers, and can not be referred to the central nervous system. The fact that the ocular muscles tire so readily coincides perfectly with the similar symptom in nuclear ophthalmoplegia. The writer concludes with the statement that if the affection can be referred to a nervous origin, only the fibrils can be incriminated. None of his patients were cured, but one was much improved by light massage and tonics, especially phosphorus and quinin, alternating with subcutaneous injections of strychnin. The improvement has been maintained for more than two years.

114. **Drunkard's Liver in a Child.**—A little girl was given regularly for four years a small glass of beer—.2 liter—or a wineglassful of wine—.12 liter—every evening, and during the

summer as much beer at the noon-day meal as she wanted. Symptoms developed suggesting either tuberculous peritonitis or atrophic cirrhosis of the liver, and the autopsy confirmed the existence of the latter. The prognosis of such cases is unfavorable if not absolutely fatal. Treatment is usually ineffectual, but occasionally good results have been attained with mercurial inunctions, abdominal massage and prolonged use of Carlsbad water. Beck has collected from various writers 303 cases of cirrhosis of the liver in children, which includes 48 directly traceable to alcohol. The present case was remarkable by the smallness of the daily dose in comparison to the effects.

122. **Mortality from Diphtheria in Germany.**—Mueller presents in graphic form the mortality from diphtheria in Germany during the last twelve years, showing the remarkable lessening of the mortality from this cause since serum treatment was introduced. Statistics covering such a long period and a population of ten millions can not be ascribed to chance or casual circumstances.

123. **Alexins in Milk and in Infant Serum.**—Moro states that his research has established that there are no alexins in milk, and that the alexins in the serum of breast-fed infants are far more powerful than those of the artificially fed. The alexins from the most debilitated breast-fed nursling are very much more bactericidal than those derived from the serum of even robust, artificially-fed infants.

127. **Reflexes in Early Childhood.**—Cattaneo found the plantar reflex and knee-jerk almost constant in infants. They were especially pronounced, as also the abdominal reflex in rachitic children.

128. **Some of the Causes of Intestinal Disorders in Infants.**—Juergenson reports the cases of two infants fed with Sohxlet sterilized milk and healthy when symptoms of sudden illness developed suggesting poisoning. He found that the rubber stoppers of the jars used gave off antimony and sulphur in contact with sour milk. In other cases the trouble was traced to the well water in which traces of nitrates were found.

132. **Puncture of the Pericardium.**—Fraenkel describes two typical cases of pericarditis with effusion to illustrate his claim that the puncture should be made on the right side, from 3 to 3.5 cm. from the edge of the sternum. The veins of the heart are very much enlarged in such cases, and there is usually more or less hypertrophy of the heart, particularly of the left ventricle. Consequently there is great danger of injury from puncture on the left side. The heart does not sink back as the subject reclines, but has a tendency to float on the surface of the fluid, which brings it close to the wall of the thorax to which it may be adherent in some cases. The effusion frequently collects behind the heart and only a small amount can be evacuated by puncture. If the heart beat is perceptible on the left side and there is an area of dulness below it, puncture is permissible. But if the diaphragm is not forced down, the puncture should be made on the right side in the third or fourth interspace at the point of absolute dulness. The heart may be totally displaced to the right, and consequently one must be sure that the area of dulness passes beyond the right parasternal line at least.

134. **Influence of Formaldehyd on the Constituents of the Urine.**—Formaldehyd enters into chemical combination with some of the elements in the urine and disturbs or prevents certain important reactions on the part of the indican, uric acid and acetic acid, pentoses, etc. Hence it should not be added to urine which is to be analyzed.

135. **Treatment of Acute Nephritis.**—Renvers remarks that an unnoticed sore throat, a catarrhal gastrointestinal affection or an infectious disease may be the cause of an apparently spontaneous nephritis. Appropriate treatment of the primary affection will promptly cure the latter. Early serum treatment of a diphtheritic affection, for example, will have a favorable effect on the kidneys, not only preventing nephritis but curing it if already established. In promoting elimination of the toxic substances by the skin and intestines, the saline are the only purgatives at our disposal which do not contain some elements irritating for the kidneys. Intestinal injections of warm saline solution are also beneficial. The diet should contain carbohydrates and fats to supply the needed calories, and limit the albumin to what is actually necessary, not more than 50 or 60 gm. for an adult not at work. An exclusive milk diet is not advisable as it contains albumin. The milk can be diluted with gruels, etc. As the nephritis subsides the milk can be increased to two quarts a day. Even after albuminuria has entirely disappeared, meats should be added only tentatively to the diet. Vegetables and fruits are not permissible unless the diuresis is abundant. The allowable proportion of albumin should be supplied at first in the shape of pure vegetable albumin. In case the blood pressure is low, hot drinks will be found useful, avoiding those containing meat extractives or alcohol. Digitalis and strophanthus are rather injurious than beneficial if administered with normal blood pressure. Hot drinks of sweetened diluted milk or malt extract with cream, and brief hot footbaths are useful measures, but the only real diuretic, he reiterates, is water.

137. **Treatment of Recent Disturbances in Compensation.**—Instead of prescribing digitalis at once for a patient with dyspnea and other symptoms of disturbed compensation, Klemperer advises temporizing if the symptoms are not threatening. Absolute repose and the reassuring words of the physician, supplemented by small doses of some narcotic, will arrest the reflex suffocation and produce such improvement in twenty-four hours that digitalis will prove unnecessary. The later it is postponed the greater will be the benefit derived when it becomes actually indispensable.

138. **Treatment of Hemoptysis.**—The main point in treatment is to keep the lung quiet. The movements of the affected side should be restricted as much as possible and a bag of sand will be found useful, gradually increasing the weight of the sand from one to five pounds. Klemperer has frequently found that this aided in arresting the hemorrhage.

139. **The Diet of the Aged.**—Food for elderly people should be cut up very fine, preferably with an instrument for the purpose, a "masticator." Their teeth are defective, the muscles engaged in chewing tire easily, and they have little saliva. The best of all food for them is soups, soft eggs, and above all, milk. The old saying that wine is the milk of the aged should be transposed to: Milk is the wine of the aged.

144. **Experimental Lead Poisoning.**—Jores found that chronic lead poisoning in rabbits caused the destruction of the red corpuscles with consequent anemia. The smaller arteries were much dilated, and deposits of blood pigments were noted in the spleen, marrow, liver and kidneys.

146. **Biliary Capillaries in Pathogenesis of Icterus.**—The new stain with which Eppinger has been studying the biliary capillaries is a combination of Weigert's neuroglia stain and the Weigert-Vasale technic.

151. **Experimental Inoculation with Tuberculosis.**—The bacilli introduced into the trachea of rabbits induced first a catarrhal inflammation and then a proliferation of tissue which terminated in the accumulation of giant cells from the breaking down of single cells.

160. **Variolation.**—Mohammedan peoples refuse vaccination, partly from fear of infusing infidel blood into the veins of a "true believer," and partly because the poor quality of vaccine in Oriental countries has prejudiced them against it. Gros has witnessed a large number of cases inoculated with fluid from a smallpox pustule in order to arrest an epidemic of smallpox. It accomplished its end in this respect and the resulting infection was extremely mild. Localized smallpox followed in 25 cases, with no eruption in 36 and only 6 of generalized disease, out of a total of 67. Vaccination afterward was negative. The pustules resembled more those of varicella than of variola. The claim is made that the immunity conferred is more lasting than after vaccination, but Gros knew of one case of infection eight years after variolation. The inoculation is made on the dorsal side of the loose skin between the thumb and forefinger, penetrating into the cellular tissue.

165. **Serotherapy of the Plague.**—Peypers reviews the spread of the plague and quotes an article by a local practitioner in the *Indian Lancet* of March 10, which acknowledges that human science is powerless. "Millions have been its victims and millions more will be claimed as its victims." The optimistic assertions of Europeans, Calmette in particular, that the terrible hecatombs of the middle ages need not be feared at the present day, are criticised by Peypers, who thinks that serotherapy is not proving the anticipated protection.

169. **Enquiry in the Gynecologic Field in Regard to Contagiousness of Cancer.**—Bossi has been investigating for the last ten years the question of contagion of malignant neoplasms. He thinks that exceptionally favorable conditions for contagion are afforded by cancer of the cervix in married women. It usually develops into a comparatively late stage before it is recognized, and the traumatism of cohabitation frequently causes it to bleed. The hyperemia of the parts would also favor contagion. Notwithstanding these and other factors favorable to contagion under these circumstances, he was unable to discover a single instance of malignant disease of the penis among the husbands of the 180 women with cancer of the cervix whom he has had occasion to treat during these ten years. He wrote to the leading gynecologists of Europe and received replies from 38. All unanimously declared that they had never known of cancer on the penis of the husband of any patient with malignant disease of the cervix. Hertaux writes that he has had only 6 cases of cancer of the penis, and none of them could be traced to a woman with uterine cancer. Richelot has never witnessed nor found in science a case of this nature. Fehling replies: "None in twenty-five years of practice." Dermacuay, Bossi states, reports the single instance of cancer of the uterus in the wife in 134 cases of cancer of the penis in his practice.

170. **Hemostatic Action of Endovenous Injections of Calcium Chlorid.**—Silvestri proclaimed in 1898 the great value of the calcium salts in all kinds of hemorrhagic affections, especially scorbutus. It rapidly restores normal coagulability to the blood. He published 13 cases which demonstrated the constant and prompt hemostatic action of calcium hypophosphite in all kinds of hemorrhage. He administered it by the mouth or rectum. He has since applied this method of hemostasis in urgent cases by the endovenous route, and reports four in detail. He injected 100 or 150 c.c. of a 1 per cent. solution of calcium chlorid, repeated in twelve hours if necessary. One patient was a girl of 13 with hemorrhage from the intestines the fourteenth day of typhoid fever. The hemorrhage was arrested in 35 minutes after the injection. Another patient was a woman of 42 with severe menorrhagia which subsided in less than an hour after the injection. The same result was obtained in a case of hemoptysis and in one of hemophilia. The injections failed to arrest the hematemesis in a case of gastric ulcer, and the patient proved rebellious to injections of gelatin later. Zibell announced last year that gelatin contains .6 per cent. of calcium and attributes its hemostatic action to this constituent.

Queries and Minor Notes.

GARRETSON, S. D., May 12, 1902.

To the Editor:—Please give me the law for medical registration in the state of Washington. H. L. SAYLOR.

ANS.—Diploma from college of at least three years' course and an examination.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia; John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; and John Harold, M.D., London. With Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume I. Twelfth Series. 1902. Cloth. Pp. 306. Price, $2.00. Philadelphia: J. B. Lippincott Co. 1902.

THE OPERATIONS OF SURGERY. By W. H. A. Jacobson, M.Ch. Oxon., F.R.C.S., Surgeon to Guy's Hospital; and F. J. Stewart, M.S. London, F.R.C.S., Assistant Surgeon Guy's Hospital, and to the Hospital for Sick Children. Fourth Edition, Revised, Enlarged and Improved. 550 Illustrations. Two Volumes: Volume I—Operations on the Upper Extremity; Operations on the Head and Neck; Operations on the Thorax. Volume II—Operations on the Abdomen; Operations on the Lower Extremity; Operations on the Vertebral Column. Cloth. Pp. 402. Price, $10.00. Philadelphia: P. Blakiston's Son & Co. 1902.

ATLAS AND EPITOME OF OPERATIVE SURGERY. By Dr. Otto Zuckerkandl, privatdocent in the University of Vienna. From the Second Revised and Enlarged German Edition. Edited, with Additions, by J. Chalmers DaCosta, M.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. With 40 Colored Plates and 278 Text Illustrations. Cloth, $3.50 net. Pp. 410. Philadelphia: W. B. Saunders & Co. 1902.

ATLAS AND EPITOME OF OTOLOGY. By Gustav Bruhl, M.D., of Berlin, with the Collaboration of Professor Dr. A. Politzer, of Vienna. Edited, with Additions, by S. MacCuen Smith, M.D., Clinical Professor of Otology, Jefferson Medical College, Philadelphia. With 244 Colored Figures on 39 Lithographic Plates and 99 Text Illustrations. Pp. 292. Cloth, $3.00 net. Philadelphia: W. B. Saunders & Co. 1902.

PHOTOGRAPHIC ATLAS OF THE DISEASES OF THE SKIN. A Series of 80 Plates, Comprising More Than 100 Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By George Henry Fox, A.M., M.D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, N. Y. Part XI. Philadelphia: J. B. Lippincott Co. 1901.

SURGERY OF THE RECTUM. By Charles B. Kelsey, A.M., M.D., Late Professor of Pelvic and Abdominal Surgery at the New York Post-Graduate Hospital. Sixth Edition. Illustrated by 215 Engravings. Cloth. Pp. 402. Price, $3.00. New York: Wm. Wood & Co. 1902.

PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, at the Fifty-seventh Annual Meeting, Held in Milwaukee, Wis., June 11 to 14, 1901. Cloth. Pp. 333. Published by the American Medico-Psychological Association. 1901.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. Thirty-third Annual Session, 1901. Cloth. Pp. 343. Lincoln, Neb.: Published by the Western Medical Review Publishing Co.

TRANSACTIONS OF THE CHICAGO PATHOLOGICAL SOCIETY. From October, 1899, to June, 1901. Cloth. Pp. 486. Chicago: American Medical Association Press. 1902.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 1 to 7, 1902, inclusive:

James K. Ashburn, contract surgeon, leave of absence extended fourteen days.

Charles L. Baker, contract surgeon, from Augusta, Ga., to San Francisco, for temporary duty in the Department of California.

William H. Block, captain and asst.-surgeon, Vols., leave of absence for one month granted.

William J. Calvert, lieutenant and asst.-surgeon, U. S. A., leave of absence for two months granted, to take effect from the completion of his temporary duty at Fort Barrancas, Fla.

Joseph T. Clarke, captain and asst.-surgeon, U. S. A., member of a board in Philadelphia to ascertain and fix the responsibility for any deficiencies or damage to quartermaster's property received at that depot during the present calendar year.

Basil H. Dutcher, captain and asst.-surgeon, U. S. A., leave of absence for four months granted, to take effect on the arrival of Lieut. Clyde S. Ford, asst.-surgeon, U. S. A., at Fort Hancock, N. J.

Charles B. Ewing, major and surgeon, U. S. A., to represent the Medical Department, along with others already thus assigned, at the Eleventh Annual Meeting of the Association of Military Surgeons of the United States, to be held at Washington, D. C. June 5 to 7, 1902.

Clyde S. Ford, lieutenant and asst.-surgeon, U. S. A., from duty at the U. S. General Hospital, Washington Barracks, D. C., to Fort Hancock, N. J.

Joseph H. Ford, lieutenant and asst.-surgeon, U. S. A., from duty at the post of Washington Barracks, D. C., to duty at the U. S. General Hospital at that place.

James D. Glennan, major and surgeon, U. S. A., is relieved from further duty in the Department of California and will repair to Washington, D. C., reporting to the Surgeon-General for instructions.

James C. Gregory, contract surgeon, now at Tunstall, Va., to duty at Fort Myer, Va.

John D. Hall, lieut.-col. and deputy surgeon-general, leave of absence for twenty-one days granted.

Luther S. Harvey, captain and asst.-surgeon, Vols., leave of absence and surgeon's certificates of disability extended one month on account of sickness.

John R. Hicks, contract-surgeon, from Fort Screven, Ga., when relieved by Captain Charles F. Kieffer, asst.-surgeon, U. S. A., will proceed to Fort Wingate, N. M., for duty.

Paul H. Ludington, contract surgeon, now at Omaha, Neb., to report to the commanding general, Department of the Missouri, for duty as attending surgeon in that city.

William J. L. Lyster, lieutenant, asst.-surgeon, U. S. A., from the Division of the Philippines to San Francisco, Cal., for duty with the Hospital Corps Company of Instruction at Fort McDonell, Cal.

Louis A. Molony, contract surgeon, from Cincinnati, Ohio, to San Francisco, Cal., for temporary duty in the Department of California.

William H. Moncrieff, contract surgeon, now at Atlanta, Ga., to report for duty at Jefferson Barracks, Mo.

James R. Mount, contract surgeon, now at Kansas City, Kan., will proceed to San Francisco, Cal., for temporary duty in the Department of California.

Edward L. Munson, captain and asst.-surgeon, U. S. A., detailed a member of a retiring board to meet at the War Department, Washington, D. C.

Joseph Pettyjohn, contract surgeon, now at Vancouver Barracks, is relieved from duty in the Department of the Columbia, and will proceed to his home, Augusta, Ga., for annulment of contract.

John A. Rafter, contract surgeon, now at West Winfield, N. Y., is relieved from further duty in the Division of the Philippines and assigned to duty at Madison Barracks, N. Y.

Anton R. Shier, contract surgeon, now at Burlington, Iowa, to report for duty at Fort Worden, Wash.

Hedley V. Tweedie, contract surgeon, from the Department of the Columbia, when his services can be spared from that Department to San Francisco, Cal., for duty in the Department of California.

Navy Changes.

Changes in the Medical Corps of the Navy, week ending May 10:

Medical Director W. S. Dixon, detached from duty on the retiring and medical examining boards, Washington, D. C., and ordered to continue other duty.

Medical Inspector W. A. McClurg, detached from the *Kearsarge*, upon reporting of relief, and ordered to the *Olympia*, as fleet surgeon of the North Atlantic Station.

Medical Inspector J. C. Boyd, detached from the *Olympia*, and ordered to Washington, D. C., as member of retiring and medical examining boards.

Surgeon J. M. Steele, detached from Torpedo Station, Newport, upon reporting of relief, and ordered to the *Massachusetts*.

Surgeon H. E. Ames, detached from the *Massachusetts*, upon reporting of relief, and ordered to the *Kearsarge*.

Asst.-Surgeon J. J. Snyder, detached from duty with recruiting party, when discontinued, and ordered to the Torpedo Station, Newport, R. I.

P. A. Surgeon J. E. Page, granted sick leave for two months.

P. A. Surgeon J. C. Pryor, ordered to the *Massachusetts*, May 14.

Pharmacist I. N. Hurd, detached from the *Wabash*, and ordered to the Navy Yard, Portsmouth, N. H.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended May 8, 1902:

Surgeon Eugene Wasdin, leave of absence for seven days from May 2, 1902, under paragraph 179 of the regulations.

Surgeon P. M. Carrington, Bureau order of April 30, 1902, detailing him to represent the service at American Congress of Tuberculosis, revoked.

P. A. Surgeon G. M. Guiteras, relieved from duty at Matanzas, Cuba, and directed to proceed to Philadelphia, Pa., and report to medical officer in command for duty.

P. A. Surgeon M. J. Rosenau, to proceed to Wilmington, Cape Fear Quarantine (Southport), and Beaufort, N. C., as inspector; and inspector of unserviceable property at Wilmington and Cape Fear.

Asst.-Surgeon R. H. von Ezdorf, upon being relieved by A. A. Surgeon A. B. McDowell, to proceed to Matanzas, Cuba, relieving P. A. Surgeon G. M. Guiteras.

Asst.-Surgeon L. D. Fricks, relieved from duty at Chicago, and directed to proceed to Boston, and report to medical officer in command for duty and assignment to quarters, relieving Asst.-Surgeon John McMullen.

Asst.-Surgeon C. W. Vogel, leave of absence for 15 days granted by Bureau letter of April 18, revoked. Relieved from duty at San Francisco, and directed to proceed to Dutch Harbor, Alaska, and assume command of the service.

Asst.-Surgeon B. J. Lloyd, relieved from duty at San Francisco Quarantine, and directed to proceed to Nome, Alaska, for special temporary duty, assuming command of the service.

A. A. Surgeon Hugh Borford, granted leave of absence for two weeks from May 5.

A. A. Surgeon A. D. Foster, granted leave of absence for fourteen days from May 17.

A. A. Surgeon E. F. McConnell, relieved from duty at Havana, Cuba, and directed to proceed to Nuevitas, Cuba, relieving A. A. Surgeon O. W. Stone.

A. A. Surgeon A. B. McDowell, relieved from duty at Havana, Cuba, and directed to proceed to Santiago, Cuba, relieving Asst.-Surgeon R. H. von Ezdorf.

A. A. Surgeon O. W. Stone, upon being relieved by A. A. Surgeon E. F. McConnell, to proceed to his home and await annulment of appointment as acting assistant-surgeon.

A. A. Surgeon Agnes Walker, granted leave of absence for fourteen days from May 17.

A. A. Surgeon W. S. Walkley, granted leave of absence for seven days from May 7.

Sanitary Inspector Lea Hume, granted leave of absence for thirty days from May 1.

Senior Pharmacist M. R. Mason, relieved from duty at San Francisco, and directed to proceed to Dutch Harbor, Alaska, and report to Asst.-Surgeon C. W. Vogel for duty.

Junior Pharmacist F. M. Holt, granted leave of absence for thirty days from May 1.

Junior Pharmacist L. C. Spangler, granted leave of absence for fifteen days from May 10.

BOARDS CONVENED.

Board convened at the Marine Hospital, Baltimore, May 5, 1902, for the physical examination of certain officers of the Revenue Cutter Service. Detail for the Board: Surgeon H. R. Carter, chairman; P. A. Surgeon J. A. Nydegger, recorder.

Board convened at the Marine Hospital, New Orleans, for the physical examination of such officers of the Revenue Cutter Service as may present themselves, May 12, 1902. Detail for the Board: P. A. Surgeon C. P. Wertenbaker, chairman; Asst.-Surgeon J. W. Schereschewsky, recorder.

Board convened at the Marine Hospital, Boston, May 12, 1902, for the physical examination of such officers of the Revenue Cutter Service as may present themselves. Detail for the Board: Surgeon Fairfax Irwin, chairman; Asst.-Surgeon John McMullen, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 10, 1902:

SMALLPOX—UNITED STATES.

Alabama: Birmingham, March 1-31, 11 cases.
California: San Francisco, April 20-27, 3 cases; Stockton, April 1-30, 20 cases.
Colorado: Denver, April 19-26, 7 cases.
Illinois: April 26-May 3, Belleville, 5 cases; Chicago, 5 cases; Galesburg, 4 cases.
Indiana: Evansville, April 26-May 3, 5 cases; Indianapolis, April 26-May 3, 8 cases; Muncie, April 1-30, 3 cases; South Bend, April 26-May 3, 4 cases; Terre Haute, April 26-May 3, 3 cases.
Iowa: Ottumwa, March 29-April 20, 18 cases.
Kansas: Wichita, April 26-May 3, 4 cases.
Kentucky: Covington, April 27-May 4, 5 cases; Lexington, April 26-May 3, 1 case; Louisville, April 27, 2 cases.
Maine: Portland, April 26-May 3, 1 death.
Maryland: Baltimore, April 26-May 3, 1 case.
Massachusetts: April 26-May 3, 28 cases, 4 deaths; Brockton, 2 cases; Brookline, 1 death; Cambridge, 1 case; Malden, 6 cases.
Michigan: April 19-26, present at 110 places; Ludington, April 27-May 4, 16 cases.
Minnesota: Minneapolis, March 29-April 19, 27 cases; Winona, April 19-26, 1 case.
Missouri: St. Louis, April 27-May 4, 39 cases, 2 deaths.
Montana: Helena, April 1-30, 4 cases.
Nebraska: Omaha, April 26-May 3, 30 cases.
New Jersey: April 26-May 3, Camden, 4 cases, 1 death; Newark, 80 cases, 5 deaths; Plainfield, 6 cases, 1 death.
New York: New York, April 26-May 3, 54 cases, 14 deaths.
Ohio: Cincinnati, April 26-May 2, 18 cases; Hamilton, April 27-May 3, 3 cases.
Pennsylvania: Erie, April 26-May 3, 10 cases; Johnstown, April 19-May 3, 3 cases; Philadelphia, April 26-May 3, 15 cases, 1 death; Pittsburg, April 26-May 3, 16 cases.
Rhode Island: Providence, April 26-May 3, 4 cases.
South Carolina: Greenville, April 19-26, 6 cases, 2 deaths.
Tennessee: Memphis, April 27-May 3, 9 cases.
Utah: Salt Lake City, April 26-May 3, 4 cases.
Vermont: April 27-May 3, Burlington, 2 cases; Rutland, 1 case.
Virginia: Roanoke, April 1-30, 11 cases, 1 death.
Washington: Tacoma, April 20-27, 9 cases.
Wisconsin: Green Bay, April 27-May 4, 3 cases; Janesville, April 27-May 4, 4 cases; Milwaukee, April 19-26, 9 cases.

SMALLPOX—FOREIGN.

Brazil: Rio de Janeiro, March 16-April 6, 21 deaths.
Canada: Hamilton, April 26-May 3, 1 case; Quebec, April 19-26, 10 cases; Winnipeg, April 19-26, 8 cases.
China: Amoy, March 8-27, present.
Colombia: Panama, April 21-28, 50 cases, 5 deaths.
Egypt: Cairo, April 1-8, 1 death.
France: Paris, April 12-19, 5 deaths; Rheims, April 6-20, 7 cases, 5 deaths; Roubaix, March 1-31, 1 death.
Great Britain: Birmingham, April 12-19, 2 cases; Dublin, April 12-19, 1 case; Dundee, April 12-19, 4 cases; Glasgow, April 18-25, 7 cases, 1 death; Leeds, April 19-26, 1 case; Liverpool, April 12-19, 5 cases; London, April 12-19, 328 cases, 42 deaths; Newcastle-on-Tyne, March 30-April 19, 1 case; North Shields, March 30-April 19, 27 cases; Southampton, April 5-12, 1 case; South Shields, March 30-April 19, 21 cases.
India: Bombay, April 1-8, 6 deaths; Calcutta, March 22-April 5, 13 deaths; Karachi, March 30-April 6, 3 cases.
Italy: Bovino, April 12, epidemic; Naples, April 5-12, 10 cases.
Mexico: City of Mexico, April 13-27, 3 cases; Vera Cruz, April 19-26, 5 cases, 1 death.
Russia: April 6-12, Moscow, 5 cases, 5 deaths; St. Petersburg, 10 cases, 2 deaths.
Spain: Cartagena, April 15, epidemic.

YELLOW FEVER.

Brazil: Rio de Janeiro, March 16-April 6, 105 deaths.
Colombia: Panama, April 21-28, 5 cases, 2 deaths.
Costa Rica: Port Limon, April 14, 3 cases, 1 death.
Dutch Guiana: Paramaribo, March 1-31, 3 cases, 1 death.
Mexico: Vera Cruz, April 19-26, 9 cases, 6 deaths.

CHOLERA—INSULAR.

Philippines: Manila, March 20-29, 84 cases, 65 deaths.

CHOLERA—FOREIGN.

India: Calcutta, March 23-April 5, 255 deaths.
Turkey: Djiddah, Feb. 19-March 26, 3000 cases estimated, and 1300 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, April 20-27, 1 case, 1 death.

PLAGUE—INSULAR.

Hawaii: Honolulu, April 19, 1 death.

PLAGUE—FOREIGN.

China: Pokhoi, April 25, epidemic.
Egypt: April 7, 1901-April 7, 1902, 382 cases, and 228 deaths.
India: Bombay, April 1-8, 830 deaths; Calcutta, March 22-April 5, 1239 deaths; Karachi, March 30-April 6, 111 cases, 100 deaths.